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PERSONAL.

Mr. James A. Lee, of Congers, N. Y., has been elected County Engineer of Rockland county, N. Y.

Mr. John Claflin, of New York city, has resigned as Member of the New York City Rapid Transit Commission.

Mr. M. L. Miller has been appointed Superintendent of Water-Works of Monson, Mass., to succeed Mr. John E. Lockwood.

Mr. Randolph S. Warner has been elected President of the newly organized Republic Iron & Steel Co., with headquarters at Chicago.

Messrs. Nicholas S. Hill, Jr., and Alfred M. Quick, of Baltimore, Md., have formed the partnership of Hill & Quick, as general consulting engineers.

Mr. Samuel S. Darling, Superintendent of Construction in the Water-Works Department of Providence, R. I., has resigned after eighteen years of service.

Professor William H. Brewer, of the Yale Scientific School, will soon leave with a party of scientists for Alaska, to study the forests of that district.

Mr. Birney C. Batcheller, of Philadelphia, has been awarded the John Clarke gold medal of the Franklin Institute for his inventions in pneumatic dispatch apparatus.

Col. John S. Lord, Chief Clerk of the State Bureau of Labor Statistics, has been appointed Chief of the Division of Population of the Census, with headquarters at Washington, D. C.

Dr. Tarleton H. Bean, formerly Superintendent of the Aquarium of New York city, has been appointed Director of Forestry and Fisheries of the United States Commission to the Paris Exposition of 1900.

Mr. John W. Lieb, Jr., formerly with the Edison Electric Illuminating Co., of New York, has been appointed Associate General Manager to its successor, the New York Gas & Electric Light, Heat & Power Co.

Mr. E. W. Cummings, hydraulic and civil engineer, has been appointed Assistant Engineer on the proposed Cedar River water supply system for Seattle, Wash., and will have charge of the diverting dam and reservoirs.

Mr. Louis L. Tribus, M. Am. Soc. C. E., of New York city, has been retained as Consulting Engineer for the Village of Nyack, N. Y., in the matter of improvement of its water system and completion of a sand filtration plant.

Mr. William Kent, Associate Editor of Engineering News, will sail for Rotterdam on Saturday, May 20. He expects to make a three months' trip, principally on the Continent. Letters may be addressed to him care of Engineering News, 1 Arundel St., Strand, London.

Mr. G. Whaley, Vice-President and General Manager of the Panama R. R. Co., has been appointed First Vice-President, resident abroad, Paris office, 46 Boulevard Haussmann. Mr. E. A. Drake, Assistant General Manager and Secretary, has been appointed Second Vice-President and Secretary. Mr. Charles Paine has been appointed as General Manager of the same company.

Messrs. John Lambert, of Joliet, Albert Schoch, of Ottawa, and Isaac Taylor, of Peoria, have been appointed by Governor Tanner, of Illinois, as a State Commission to inspect and report upon the Chicago Drainage Canal. The law requires that such a report must be made before water can be turned into the canal. The commission will engage engineers to make surveys and measurements.

Mr. W. C. Hayes has been appointed Locomotive Superintendent of the Baltimore & Ohio R. R., and will have charge of all engine men and engines when on the road. The positions of Supervisors of Engines and Trains have been abolished, and the Locomotive Engineer will appoint in their stead a Traveling Engineer on the following sections: Philadelphia to Washington, Baltimore to Brunswick, Brunswick to Cumberland, Cumberland to Grafton, Grafton to Benwood and Parkersburg, Pittsburg to Cumberland and Wheeling, Wheeling to Sandusky and branches, Chicago to Akron Junction. The following Traveling Engineers have already been appointed: Mr. W. J. Duffy, Parkersburg and Wheeling Division; Mr. W. B. Blackwell, Second Division; Mr. M. Carey, Pittsburg to Cumberland and Wheeling; Mr. D. E. Fisher, Third Division.

OBITUARY.

Mr. David L. Bartlett, of Bartlett, Hayward & Co., iron founders, of Baltimore, Md., died on May 11, aged 83 years.

Mr. Elmer E. Shelby, civil engineer, and President of the Borough Council of Hatboro, Pa., was killed in the railway collision on the Philadelphia & Reading Ry., at Exeter, Pa., on May 12.

Mr. George S. Butcher, of the Ballston Spa Electric Light & Power Co., of Ballston Spa, N. Y., died on May 12. He was born in Hastings, England, in 1851.

Mr. H. N. Holladay, Vice-President and General Manager of the Williamsville, Greenville & St. Louis Ry., of Greenville, Mo., was shot and killed on May 15.

Mr. Jas. P. Crawford, President of the Terra Haute (Ind.) Iron & Steel Co., died at New York city, May 12. Mr. Crawford was also secretary of the Wabash Iron Co.

Mr. John Burton, General Manager of the Joint Traffic Association, at New York, died of Bright's disease, at Peak's Island, Me., on May 15. He was born in Lancashire, England, in 1841.

Mr. Green B. Boren, of Steubenville, O., General Manager of the Eastern Paving Brick Co., and owner of the large shale paving-brick plant at Catskill, N. Y., died of consumption on May 14, aged 46 years.

Mr. Norwood De Hart, a civil engineer in the employ of the city of Boston, died of pneumonia at Elizabeth, N. J., on May 11, aged 27 years. He was a member of the Western Society of Engineers of Chicago.

Mr. Eugene Hoefer, M. Am. Inst. M. E., died at Brussels on April 16. He graduated from the University of California in 1884, and has since spent most of his time on the Transvaal Gold Mining Estates, South Africa.

Mr. Donald McLean, railway contractor and promoter, was killed at the Palmer House, Chicago, May 14, by a fall from the balcony floor. He was born in Scotland 66 years ago, and had been engaged on the Oregon Short Line and the Sioux City & Pacific Ry.

Col. Daniel F. Hitt, who made the surveys for the Illinois & Michigan canal in 1831-32, died at Ottawa, Ill., May 1, at the age of 89. He served in the Black Hawk War and the Civil War, and was for several years County Surveyor of La Salle county, Illinois.

Mr. Plummer S. Page, a contractor, died at Scranton, Pa., on May 14. He was born in Vermont in 1841, and has assisted in the construction of the Delaware, Lackawanna & Western Ry., the Delaware & Hudson System, and the New York elevated railways. In 1887 he bought the street car lines in Scranton and substituted electricity for horse motive power.

Major Lewis C. Overman, formerly in the U. S. Corps of Engineers, was killed by a fall at his home at Nantucket, Mass., on May 8. He graduated from the West Point Military Academy in 1865, and became Assistant Engineer of the improvement of Des Moines Rapids, on the Mississippi River, and in 1882 was in charge of the river and harbor improvements in Ohio. In 1891 he resigned from service.

Mr. John W. Ambrose, President of the South Brooklyn Railroad & Terminal Co., died at his home in Brooklyn, N. Y., on May 15, of typhoid malaria. He was born in Newcastle, Ireland, in 1838, and came to this country at the age of 14. He laid the first eight miles of pneumatic tubes used in the United States for the Western Union Telegraph Co., and constructed several sections of the elevated railways in New York city.

Col. R. H. Hardaway died at Columbus, Ga., on April 27, aged 70 years. He was Chief Engineer and Superintendent of the Mobile & Girard R. R. during its construction, and during the Civil War commanded a battalion of artillery. After the war he became the Chief Engineer of the East Alabama & Cincinnati R. R., and from 1873 to 1881 was Professor of Engineering and Commandant of the Alabama Polytechnic Institute. He then served as Division Engineer of Location on the Tampico branch of the Mexican Central R. R. in 1882 and 1883, and from 1883 to 1897 again filled his former position of Professor of Engineering.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

NEW YORK ELECTRICAL EXHIBITION.
May 8-June 3. Madison Square Garden, New York city. Marcus Nathan, Manager, Madison Square Garden, New York city.

NEW YORK RAILROAD CLUB.
May 18. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

FRANKLIN INSTITUTE.
May 19. "The Relations of Physics and Astronomy to the Development of Mechanics Arts," Prof. Cleveland Abbe. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

ROCHESTER ENGINEERING SOCIETY.
May 19., Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.

CHICAGO ELECTRICAL ASSOCIATION.
May 19. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

THE DETROIT ENGINEERING SOCIETY.
May 19. Secy., Henry Goldmark, Wayne Co. Savings Bank Bldg., Detroit, Mich.

THE ENGINEERS' CLUB OF PHILADELPHIA.
May 20. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' CLUB OF COLUMBUS.
May 20. Secy., H. M. Gates, 12½ North High St., Columbus, O.

ENGINEERS' CLUB OF ST. LOUIS.
May 21. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo

NATIONAL ELECTRIC LIGHT ASSOCIATION.
May 23-25. Annual meeting, New York. Secy., Geo. F. Porter, 136 Liberty St., New York city.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
May 25. Secy., H. C. McLeod, 112 Mansfield St., Montreal, Que.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
May 30. Secy., Wm. H. Searles, Case Library Bldg., Cleveland.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
May 31. Secy., Ralph W. Pope, 26 Cortlandt St., New York city.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
June 2. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
June 2. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

ENGINEERING SOCIETY OF WESTERN NEW YORK.
June 5. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
June 7. "On the Theory of Concrete," George W. Rafter. Secy., C. W. Hunt, 220 W. 57th St., New York city.

WESTERN SOCIETY OF ENGINEERS.
June 7. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

FOUNDRYMEN'S ASSOCIATION (Philadelphia).
June 7. Secy., Howard Evans, Pier 45, N. Delaware Ave., Philadelphia, Pa.

ENGINEERING ASSOCIATION OF THE SOUTH.
June 8. Secy., H. M. Jones, 1000 Broad St., Nashville, Tenn.

WISCONSIN STATE CHEMICAL ASSOCIATION.
June 9. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.

ST. LOUIS RAILWAY CLUB.
June 9. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

MONTANA SOCIETY OF ENGINEERS.
June 10. Butte, Mont. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

BROOKLYN ENGINEERS' CLUB.—A meeting of this club was held on May 11, at which Mr. S. K. Colby presented a paper on "Aluminum."

WESTERN FOUNDRYMEN'S ASSOCIATION.—At the annual meeting on May 10, officers were elected as follows: Pres., C. J. Wolff; Vice-Pres., William Ferguson; Secy., B. M. Gardner; Treas., R. J. Cleveland.

THE ACADEMY OF SCIENCE.—The Geological Section of this society held a regular meeting on May 15 at the house of the American Society of Mechanical Engineers, New York city. The papers presented were as follows: "Artesian Water Supply in New Jersey," J. C. Smock, State Geologist of New Jersey; "Geology of Elizabeth Islands," Arthur Holick; "Physical Properties of Clay," Heinrich Ries; "Photography of Minerals," W. Goold Levison.

CANADIAN SOCIETY OF CIVIL ENGINEERS.—At the meeting of this society held on May 11, a paper entitled "Holding Power of Wood Screws" was presented by Messrs. W. M. Macphial and T. T. Irving. This was a report on a series of 317 separate tests of screws ranging in size from ⅜-in. to ¾-in., driven in red pine and white oak. The purpose of the tests was to determine the effect of boring different sized holes in addition to verifying previous experiments on the actual holding power of such screws.

FRANKLIN INSTITUTE.—The following is a list of the meetings of the several sections of the Institute for May and June: May 19, "The Relations of Physics and Astronomy to the Development of the Mechanic Arts," Prof. Cleveland Abbe; May 23, "Electric Clocks, Historically Considered, etc., and the Uniform Distribution of Time," James Hamblet; June 6, "The Systematic Application of the Microscope to the Detection of Food Adulterations," discussion; June 13, 'Water-Power Electrical Plants in the United States," B. C. Washington, Jr.

NEW YORK ELECTRICAL SOCIETY.—The 198th regular meeting of this society was held at the Electrical Exhibition, Madison Square Garden, New York city, on May 13. The purpose of the meeting was to celebrate the centennial of the discovery of the electric battery by Volta, and express the sentiments of American electricians. The leading Italian scientific societies were represented, as well as the Italian government. Addresses were presented in Italian, and several Americans spoke in eulogistic terms of Volta and his experiments and discoveries.

Appropriate messages were sent from the meeting to The Volta Electrical Exposition, now in progress at Como, Italy, and to the electrical societies of that country.

ST. LOUIS RAILWAY CLUB.—Through the courtesy of the Wabash Railroad, about 200 members and guests of this club visited the University of Illinois on May 12. The party left St. Louis at 9.00 a. m. on the Continental Limited, and arrived at the University at 1 p. m. After luncheon a tour was made of the buildings occupied by the College of Engineering, including the hydraulic and materials testing laboratory, the forge shop, foundry and machine shop, the electrical engineering laboratory, the mechanical engineering laboratory, the central heating plant and the main Engineering Hall, as well as the handsome new library building. A brief session of the club was also held, at which the relation between education and railroad service was discussed. The visitors left Champaign at 5.00 p. m., supper being served on the train, and arrived in St. Louis at 8.15.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—The annual business meeting of the Institute was held at the House of the American Society of Mechanical Engineers, New York city, on the afternoon and evening of May 16. The report of the council exhibited a net membership as follows: Honorary, 2; full members, 363; associate members, 768; making a total of 1,133. The total cash receipts for the year amounted to $13,162, including the Treasurer's balance of $1,453 carried over from last year. The total expenditures amounted to $9,864, while $3,298 is carried over onto next year's account. The net gain in income over the previous year amounted to $2,434.

The committee appointed to prepare a list of subjects needing investigation reported, submitting the following topics to the electrical engineering departments of the various American technical colleges:

(1) The effect of sustained high temperature upon the insulation resistance of dielectrics.

(2) The influence of sustained high temperature upon the dielectric strength of insulating materials.
(3) The influence of sustained high temperature upon the hysteretic coefficient of commercial iron.
(4) The influence of chemical impurities in iron or steel, upon the hysteretic coefficient.
(5) The hysteretic coefficient of magnetic alloys.
(6) The temperature coefficient of resistivity in commercial copper wires.
(7) The temperature coefficient of resistivity in commercial aluminum wire.
(8) The temperature coefficient of resistivity in alloys commercially employed. (It is desirable to include analysis of the alloys tested as well as their physical properties.)
(9) The highest conductivity obtainable in copper wire at any standard temperature.
(10) The highest conductivity obtainable in aluminum wires at any standard temperature.
(11) The analysis of dielectric losses between parallel copper wires maintained at high E. M. F.; (1) alternating and (2) continuous, into component parts, such as chemical, electrical and mechanical.
(12) The influence of wave form of alternating E. M. F. upon the dielectric strength of dielectrics.
(13) The influence of wave form of alternating E. M. F. upon the sparking distance between needle points in air.
(14) The influence of the room temperature upon the temperature elevation of dynamo machines under a given load, as computed from their increase in resistance under load. (Sec. 32, Preliminary Report of Standardizing Committee to Amer. Institute of Elec. Engrs., June, 1898.)
(15) The distribution of temperature elevation in field coils of dynamo machines as dependent upon their form and dimensions.
(16) The relations between the "load loss" and "short-circuit core loss" of an alternator. (This has reference to Par. 166, A. I. E. E., Preliminary Report on Standardization, June, 1898.)
(17) The counter-E. M. F. of electrolytic deposition cells at potential differences ranging between the maximum polarization voltage and zero.
(18) The seat of the increased counter E. M. F. in storage cells during rapid discharge.
(19) The magnetic properties of alloys containing iron, nickel and cobalt.
(20) The magnetic retentivity of powerfully twisted iron and steel wires, or of magnets composed of such twisted wires.
(21) The permeability of magnetic materials at low values of magnetizing force.
(22) The dielectric strength of different substances employed for insulating at different frequencies of alternation.
(23) The influence of very high frequencies of alternation upon the sparking distance between needle points in air. (The highest attainable frequencies preferred.)
(24) The dielectric strength of vapors of different substances.
(25) Influence of wave form upon efficiency of converters. (The so-called rotary converters.)
(26) The influence of magnetic field upon electrolytically deposited bismuth.
(27) The conditions giving rise to sparking at commutators.

Of these subjects, the following numbers have been taken up at different colleges: Nos. 1, 2, 3, 4, 5, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26 and 27. The plan has met with the general approval of those members of the Institute who are in charge of electrical laboratories in universities and colleges.

At the evening session Mr. Frank J. Sprague, of the Sprague Electric Co., presented a full and very interesting description of the Sprague multiple unit system of operating electric railways. The history of the subject was briefly treated, and the reasons leading to the adoption of the system on the Lake Side Elevated Ry. of Chicago were given in some detail. To assist his hearers to understand the principle of the system, Mr. Sprague exhibited a number of stereopticon views and a full-sized working model of his automatic controller, which is the only additional apparatus required in installing the system. Owing to the lateness of the hour the discussion was brief.

The following officers were elected for the ensuing year: Pres., Arthur E. Kennelly, Philadelphia; Vice-Presidents, J. W. Lieb, Jr.; Chas. F. Scott, Pittsburg, Pa., and L. B. Stillwell, Niagara Falls; Secy., Ralph W. Pope; Treas., George A. Hamilton; Managers, S. Dana Greene, C. S. Bradley and W. D. Weaver.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng. News.
May 18.	Heat'g and ventilat'g	Ellis Island, N.Y.H.	Apr. 27
	Advertised, Eng. News, Apr. 27 and May 4.		
May 18.	Pumping machinery	Willimantic, Conn.	Apr. 27
	Advertised, Eng. News, Apr. 27 and May 4.		
May 18.	Dredging ship channel	Baltimore, Md.	Apr. 13
	Advertised, Eng. News, Apr. 13 to May 4.		
May 18.	Removing rock, etc.,	Mystic River, Conn.	Apr. 20
	Advertised, Eng. News, Apr. 20 to May 11.		
May 18.	Dredging,	Stamford Harbor, Conn.	Apr. 20
	Advertised, Eng. News, Apr. 20 to May 11.		
May 18.	Water meters,	Newark, N. J.	May 18
May 19.	Macadamizing,	Roselle, N. J.	May 4
	Advertised, Engineering News, May 4.		
May 19.	Pier work,	St. Joseph, Mich.	Apr. 20
	Advertised, Eng. News, Apr. 20 to May 11.		
May 19.	Sewers,	Cambridge, O.	Apr. 27
	Advertised, Engineering News, Apr. 27.		
May 19.	School building,	South Bend, Ind.	May 18
May 19.	Bridge,	Philadelphia, Pa.	May 18
May 19.	Electric lighting,	Newark, N. Y.	May 18
May 19.	School building plans,	Westfield, Mass.	May 18
May 20.	School building,	Monessen, Pa.	May 18
May 20.	Dredging plant,	Buffalo, N. Y.	Apr. 20
	Advertised, Eng. News, Apr. 20 to May 11.		
May 20.	Asphalt paving,	Washington, D. C.	Apr. 27
	Advertised, Engineering News, Apr. 27.		
May 20.	Sewer pipe, etc.,	Norristown, Pa.	May 4
	Advertised, Eng. News, May 4 and 11.		
May 20.	School building plans,	Montgomery, Ala.	May 4
May 22.	Electric supplies, stacks, etc.,	Chicago, Ill.	May 11
May 22.	Brick building,	Eagle Grove, Ia.	May 11
May 22.	School building,	Glenwood, Minn.	May 11
May 22.	Macadamizing,	Risingsun, Ind.	May 11
May 22.	W.-w'ks and electric plant,	Cullman, Ala.	May 4
May 22.	Macadamizing, etc.,	Cincinnati, O.	Apr. 27
May 22.	Portland cement,	Louisville, Ky.	Apr. 27
	Advertised, Eng. News, Apr. 27 to May 18.		
May 22.	Brick paving,	Glens Falls, N. Y.	Apr. 20
	Advertised, Eng. News, Apr. 20 to May 11.		
May 22.	Excavating,	Oswego, N. Y.	Apr. 27
	Advertised, Eng. News, Apr. 27 to May 18.		
May 22.	Plumbing, etc.,	Ellis Island, N. Y. H.	April 27
	Advertised, Eng. News, Apr. 27 and May 4.		
May 22.	Bridge work,	Toronto, Ont.	Apr. 27
	Advertised, Eng. News, Apr. 27 and May 4.		
May 22.	Government building,	Washington, D. C.	May 18
May 22.	Church building,	London, Ont.	May 18
May 22.	Water pipe, etc.,	Schenectady, N. Y.	May 18
May 22.	Water-works,	Pine Island, Minn.	May 18
	Advertised, Engineering News, May 18.		
May 22.	Telford paving,	Bloomfield, N. J.	May 18
May 22.	Brick paving,	Erie, Pa.	May 18
May 22.	Improving streets,	Greensburg, Ind.	May 18
May 22.	Public lighting,	Vincennes, Ind.	Apr. 13
May 23.	School buildings,	Detroit, Mich.	May 18
May 23.	Water-works,	Sterling, Ont.	May 18
May 23.	County roads,	Riley, Ind.	May 18
May 23.	Paving,	Jersey City, N. J.	May 18
May 23.	Paving, etc.,	Kansas City, Mo.	May 18
May 23.	Paving,	Binghamton, N. Y.	May 11
	Advertised, Eng. News, May 11 and 18.		
May 23.	Wharf,	Burnt Church, N. B.	May 11
May 24.	Street signs (500),	Des Moines, Ia.	May 11
May 24.	Water-works,	Gaffney City, S. C.	May 11
May 24.	Steel bridges (5),	Aberdeen, S. Dak.	May 4
May 24.	Masonry arch,	Cleveland, O.	May 18
May 24.	Chapel, etc.,	Boston, Mass.	May 18
May 24.	Court house additions,	Springfield, Mass.	May 18
May 24.	High school building,	Norristown, Pa.	May 18
May 24.	Dredging,	New York, N. Y.	May 18
May 24.	Asphalt paving,	Rochester, N. Y.	May 18
May 25.	School building plans,	Indianapolis, Ind.	May 18
May 25.	Maps and surveys,	Pomeroy, O.	May 18
May 25.	Road rollers (3),	New York, N. Y.	May 18
May 25.	Grading, etc.,	Guttenberg, N. J.	May 18
May 25.	Dredging,	Mississippi	Apr. 27
	Advertised, Eng. News, Apr. 27 to May 18.		
May 25.	Dredging,	Chicago, Ill.	Apr. 27
	Advertised, Eng. News, Apr. 27 to May 18.		
May 25.	Brick storehouse,	North Point, Md.	Apr. 27
	Advertised, Eng. News, Apr. 27 to May 18.		
May 25.	Harbor work,	Wisconsin	Apr. 27
	Advertised, Eng. News, Apr. 27 to May 18.		
May 25.	Boiler house, etc.,	Chicago, Ill.	May 4
	Advertised, Eng. News, May 4 and 11.		
May 26.	Electric lighting,	Newport News, Va.	May 11
May 26.	Gas franchise, 50-yr.,	Danville, Ill.	May 11
May 26.	Mortar carriages,	Washington, D.C.	May 11
May 26.	Colecting garbage, etc.,	Binghamton, N. Y.	May 4
	Advertised, Eng. News, May 4 to 18.		
May 26.	Water pipe, etc. (4,100 tons),	St. Louis.	May 18
May 26.	Cement (10,000 bbls.),	New York, N. Y.	May 18
May 26.	Bulkhead wall,	New York, N. Y.	May 18
May 26.	Sewers,	Wahpeton, N. Dak.	May 18
May 27.	Grading and gravelling	Minnetonka, Minn.	May 18
May 27.	School building,	St. Johnsbury, Vt.	May 18
May 27.	Bridge,	Washington, D. C.	May 4
	Advertised, Engineering News, May 4.		
May 27.	U. S. building work,	San Francisco, Cal.	Apr. 27
	Advertised, Eng. News, Apr. 27 to May 4.		
May 27.	Water pipe, etc.,	Washington, D. C.	Apr. 27
	Advertised, Engineering News, Apr. 27.		
May 27.	Wharf,	Tompkinsville, N. Y.	May 11
	Advertised, Eng. News, May 11 and 18.		
May 29.	Jail building plans,	New Orleans, La.	May 11
May 29.	Court house,	Medicine Hat, N. W. Ter.	May 11
May 29.	Dredging,	San Francisco, Cal.	May 11
May 29.	School building,	Toledo, O.	May 11
May 29.	Fire-alarm system,	New Orleans, La.	May 4
	Advertised, Eng. News, May 4 to 25.		
May 29.	Movable dam,	Louisville, Ky.	May 4
May 29.	Pumping engine,	Allentown, Pa.	May 4
	Advertised, Eng. News, May 4 to 25.		
May 29.	Court house addition,	Salisbury, N. C.	May 18
May 29.	College building,	Minneapolis, Minn.	May 18
May 29.	Sewerage system,	Carrollton, Mo.	May 18
	Advertised, Engineering News, May 18.		
May 30.	Passenger elevator,	Hamilton, O.	May 18
May 30.	School building,	Tekamah, Neb.	May 18
May 30.	Drill hall,	Vancouver, B. C.	May 11
May 31.	Anchors (9),	Washington, D. C.	May 11
May 31.	Floating dock,	Havana, Cuba	May 11
May 31.	Jetties, St. John's River,	Fla.	May 4
	Advertised, Eng. News, May 4 to 25.		
May 31.	Improving water-works,	Pendleton, Ore.	May 4
	Advertised, Eng. News, May 4 and 11.		
May 31.	Dams & shore protection,	Rock Island, Ill.	Apr. 27
	Advertised, Eng. News, Apr. 27 to May 18.		
May 31.	Plate girder railway bridge,	Joliet, Ill.	Apr. 13
	Advertised, Engineering News, Apr. 13.		
May 31.	Dredges (2),	St. Louis, Mo.	Apr. 20
	Advertised, Eng. News, Apr. 20 to May 25.		
May 31.	Paving,	West Boylston, Mass.	May 18
	Advertised, Eng. News, May 18 to 25.		
May 31.	Steel bridge,	Dayton, O.	May 18
	Advertised, Engineering News, May 18.		
May 31.	Army buildings,	Savannah, Ga.	May 18
May 31.	Hospital building, etc.,	Danville, Ill.	May 18
May 31.	Agricultural station,	Sitka, Alaska	May 18
May 31.	Paving bonds,	McConnellsville, O.	May 18
No date.	Garbage disposal plant,	Savannah, Ga.	May 4
	Advertised, Eng. News, May 4 and 11.		
No date.	Water-works,	Sanford, N. C.	May 11
No date.	Railroad ties (500,000),	Davenport, Ia.	May 18
	Advertised, Engineering News, May 18.		

RAILWAYS.

ALASKA & NORTHWESTERN.—Application will be made at the next session of the Canadian parliament, according to reports, for an act to incorporate this company, which proposes to build a railway from Pyramid Harbor north through Chilkoot Pass and by way of the Dalton trail to Fort Selkirk. The company was incorporated in West Virginia Feb 2, 1898, with a capital stock of $6,000,000, to build the American end of the line. Among those interested are N. Pierre Humbert, Jr., and F. W. Ames, Boston, Mass.; and George Campbell, Philadelphia, Pa.

ALGOMA CENTRAL.—We are informed that surveys have been made, the right of way obtained and the capital secured for this proposed line from Sault Ste. Marie to Missinabie, Ont., 225 miles. Bids will probably be let during this summer. F. H. Clergue, Pres.; John A. Wilde, Ch. Engr., both of Sault Ste. Marie, Ont.

ATCHISON, TOPEKA & SANTA FE.—This company has commenced work on the extension of its Silver City & Northern branch from San Jose to Hanover, N. Mex., and expects to complete the same before July 1.

ATLANTIC, VALDOSTA & WESTERN.—F. W. Long, Ch. Engr., Gardner Bldg., Jacksonville, Fla., informs us that 95 miles of this line are constructed and in operation, and that the remaining 30 miles will be completed in one month. The route is from Jacksonville to Valdosta, Ga., via Crawford, Fort Moniac and Haylow. G. S. Baxter & Co., Jacksonville, are the principal contractors. Walter Ferguson, Pres., 18 Wall St., New York.

AUSTIN & COLORADO VALLEY.—Reports from Fort Worth, Tex., state that John Andrewarthea, chief of the locating corps of the Wharton and Bay City division of this proposed line, will soon complete surveys. The ultimate object of this line is to connect Bay City with Velasco, Tex.

BOSTON & MAINE.—The directors of the Concord & Montreal R. R., under the control of the Boston & Albany, are reported to have recommended the building of the Manchester & Milford extension in New Hampshire. A meeting of the stockholders will be held in Concord, N. H., May 24, to accept the act of the last legislature, authorizing its construction.

CHICAGO, RICHMOND & CINCINNATI.—This company was incorporated in Indiana, May 10, with a capital stock of $100,000, to build from Cincinnati, O., to Chicago, 102 miles. John D. Parker, Chicago; J. M. Gazzam, Philadelphia, Pa.; C. S. Longstreet, New York, and Samuel Swayne, Richmond, Ind., are incorporators. Surveys near Richmond, Ind., have been started.

DAVENPORT, ROCK ISLAND & NORTHWESTERN.—Bids are asked for the delivery of 500,000 first-class white or burr oak ties, or cedar ties, in lots of from one carload upward on this line, as advertised in Engineering News. H. B. Schuler, Pres., 301 West 3d St., Davenport, Ia.

EASTERN RY. OF MINNESOTA.—This company has assumed control of the Wright & Davis line, in Minnesota, thereby giving the Great Northern a direct route into the heart of the Mesaba mining properties, by which it becomes an active competitor with the Rockefeller and the Federal Steel Co.'s interests as an ore carrier.

EAST TENNESSEE LUMBER & MINING R. R. CO.—Reports state that this company, at a meeting at Newport, Tenn., decided to issue $200,000 in bonds for constructing a line from Newport to the Sevier county line. The county court of Cocke county has been asked to appropriate $50,000. If the railway be built, the company expects to erect a plant capable of turning out 300,000 ft. of lumber a day.

ELK VALLEY COAL & IRON CO.—J. S. Lindsay, Pres., Jacksboro, Tenn., informs us that the extension being built for this company at Elk Valley, Tenn., is to be 1¼ miles in length, and is to be used for shipping coal and iron. Capt. W. C. Crosier, Ch. Engr., Knoxville, Tenn.

FRANKFORT & CINCINNATI.—Geo. B. Harper, Gen. Supt., Frankfort, Ky., informs us that there are no immediate prospects for an extension of this system.

HAWTHORNE, NEBAGAMON & SUPERIOR.—J. P. Weyerhauser, Mgr., Nebagamon, Wis., informs us that the contract has been let for this proposed line from Belham to Ashland, Wis., via Hawthorne, Steel Lake, Nebagamon and Oron River, 75 miles. The road will be used to carry timber, and is being laid with 45 and 60-lb. rails. Wm. O'Neil, Ch. Engr., Nebagamon.

MANKATO & NEW ULM.—L. P. Yale, Resident Engr., Mankato, Minn., informs us that this proposed extension of the Chicago & Northwestern Ry., from Mankato to New Ulm, Minn., 26 miles, has been located and partly cross-sectioned. The contract was let on May 3 to D. D. Streeter & Co., Chicago, Ill., and sub-contractors are now looking over the line. Work is to be completed by Dec. 1. M. Hughitt, Pres., Chicago.

PERU.—Press reports state that the Peruvian government will receive bids within 60 days for the construction of a railway from Oroyo to Cerro.

PITTSBURG, CINCINNATI, CHICAGO & ST. LOUIS.—McNally Bros., Pittsburg, Pa., are reported to have received the contract for construction and extension of the Cumberland branch of this line from Kentiworth station to Chester, near East Liverpool, O., 4.7 miles. S. W. McConnell, Engr., Steubenville, O.

SAN PETE VALLEY.—H. S. Kerr, Gen. Supt., Manti, Utah, informs us that the right of way has been arranged for and that grading in now in progress on this extension from Salt Spring Switch, on the San Pete Valley Ry., to Nebo Quarry, 6¾ miles. Henry Beal, Ephraim, Utah, has the contract for 4½ miles, and Goldsbraugh & Cazier, Nephi, Utah, for two miles. The line will be in operation by June 15. O. R. Young, Ch. Engr., Salt Lake City, Utah.

SOUTHERN.—F. S. Gannon, Gen. Mgr., Washington, D. C., is quoted as stating that he had just let the contract for 23 new locomotives, 1,000 new freight cars and 17 passenger coaches for this system.

WHITMIRE, NEWBERRY & AUGUSTA.—N. G. Evans, Secy., Edgefield, S. C., informs us that this line has been graded for about 75 miles through a prosperous section of South Carolina, running from Newberry to Augusta, via Saluda and Edgefield, and that it does not parallel any existing road. Dr. James McIntosh, Pres., Newberry, S. C.

STREET AND ELECTRIC RAILWAYS.

NORTH WOBURN, MASS.—Reports state that the North Woburn St. R. R. Co. will spend about $20,000 this spring in repairing and improving its roadbed. J. S. Brackett, Supt.

MONTVILLE, CONN.—J. F. Shaw & Co., Boston, general contractors for the proposed Montville Electric Ry., are reported to have awarded the contract to Robt. R. Duchette, New London, Conn, for the necessary grading between New London and Norwich.

ELMIRA, N. Y.—The Elmira & Corning Ry. Co. was incorporated in New York, May 11, with a capital stock of $200,000, to construct and operate an electric street railway from Elmira to Corning, 18 miles. The directors are: Hiram B. Rhymer and Edwin S. Brown, Elmira; Peter Marshall, Horseheads, N. Y.; John R. Miner, Big Flats.

NEW YORK, N. Y.—Mr. Baker, Superintendent of Electrical Equipment of the Manhattan Ry., is quoted as stating that plans and specifications for the proposed equipment of the elevated systems of this city are about completed, and that bids for the contract would probably be asked in June. Several bids will be considered, one on a basis of supplying a current of 2,200 volts, and another on a basis of 6,000 volts. The brakes now in use will be replaced by those of a more modern type.

RHINEBECK, N. Y.—Frank Latson, Village Pres., informs us that there is need of an electric street line to connect Rhinebeck with Rhinecliff-on-the-Hudson, the station of the New York Central & Hudson River R. R.; and that he believes there is a good opportunity for a company which will furnish the village both with means of transit and with electric lights.

ATLANTIC CITY, N. J.—Reports from Pittsburg, Pa., state that the Westinghouse Electric Co. has received a large order for equipment for the proposed West Jersey & Seashore Electric Ry. to be built between Philadelphia and Atlantic City.

BEAVER FALLS, PA.—The Beaver Valley Traction Co. has petitioned the council of Monaca for a franchise to build through that borough. W. R. Hazen, Supt.

LANCASTER, PA.—The Lancaster, Mechanicsburg & New Holland R. R. Co. was incorporated May 16, with $150,000 capital stock, to build an electric street railway between Lancaster and New Holland. William B. Given, Pres., Columbia, Pa.; Samuel R. Shipley, Philadelphia, and John D. Skiles, Lancaster, are incorporators.

NEWPORT NEWS, VA.—Porter & Co., Norfolk, Pa., are reported to have received the contract for constructing a section of the proposed Peninsula Electric Ry.

PETERSBURG, VA.—Jas. F. Bradley, Manchester, Va., is reported to have received the contract for the proposed electric street railway in this city. Construction work is to begin at once with a force of 200 men.

GAINESVILE, GA.—It is reported that the Gainesville & Hall County St. R. R. Co. will convert its five miles of horse-car line into a trolley line, using a 70-lb. rail; estimated total cost, about $100,000. D. E. Evans, Pres.

COLUMBUS, O.—The Columbus, New Albany & Johnstown Ry. Co. has been incorporated, with $200,000 capital stock, to build a line connecting the towns named. D. J. Ryan, Wm. Dusenbury and L. P. Stephens, of Columbus, are incorporators.

KNIGHTSTOWN, IND.—The council has granted a franchise to the Indianapolis, Greenfield & Knightstown Rapid Transit Co., and to the New Castle & Knightstown Electric Co., to build in this city. It is intended to construct a line from Indianapolis to New Castle, via Knightstown, Dunreith and Spiceland. Work will shortly begin so as to complete it by Nov. 1.

NORTH MANCHESTER, IND.—The council has granted a franchise to Thomson Arnold and John Isenberger to build a trolley line in this town.

CALUMET, MICH.—The Calumet & Hecla Mining Co. has granted a franchise to John D. Cuddihy and Edward Ryan, of this city, to build an electric street car line through its property, connecting Laurium and Red Jacket. Ample capital is said to be forthcoming, and work will commence at once.

CHICAGO, ILL.—W. L. Elkins and Geo. D. Widener, of Philadelphia, Pa., are reported to have consummated the organization of the Chicago Traction Co., to have a capital stock of about $30,000,000, which proposes to operate the lines of the North Chicago, West Chicago and Chicago Consolidated Traction Companies, formerly controlled by C. T. Yerkes.

PEORIA, ILL.—J. J. McDonald, Peoria, has been awarded the contract for erecting the power house for the Peoria & Pekin Terminal Co.'s line; estimated cost, $13,000. Work has been commenced on the 153-ft. bridge over the Kickapoo River, to cost $30,000, and grading along the road is in progress.

DULUTH, MINN.—In view of the city having let a contract for the operation of a ferry across the canal, the Interstate Traction Co. has decided to build a standard gage electric line to Park Point. Power will be furnished by the Commercial Power & Light Co. R. R. Dunn, Pres., St. Paul, Minn.; Ed. M. Patterson, Gen. Mgr.

KANSAS CITY, KAN.—W. E. Winner, Kansas City, Mo., informs us that the right of way has been obtained, the capital secured and most of the contracts let for the proposed Kansas City & Leavenworth Ry., to be 25 miles in length. Daniel H. Kimberly, Pres., Cleveland, O.; L. T. Hearndon, Ch. Engr., Kansas City, Mo.

ST. JOSEPH, MO.—The St. Joseph Ry., Light, Heat & Power Co. has been granted a franchise for the construction of a new line from 6th and Francis Sts. to 11th St.

BOULDER, COLO.—Mr. Frearsway, Montclair, Colo., has received the contract for grading, track-laying, etc., on the new electric line to be built in this city. The power house, which is being erected and equipped by the Siemens & Holske Co., Chicago, Ill., will contain four 125-HP. boilers, four engines and four generators. The company will operate four motor cars and one electric locomotive capable of pulling five trailers.

DENVER, COLO.—The Municipal Traction Co. has been incorporated, with $1,000,000 capital stock. T. S. McMurray, Pres.

SEATTLE, WASH.—Henry Bucey, Gen. Mgr. and Secy., Seattle, informs us that engineers are now definitely locating the route of the Seattle-Tacoma Ry., a projected electric line connecting Seattle and Tacoma, 31 miles. Capital has been offered by a trust company, and contracts will probably be let about July 1. John Collins, Pres.; Frank Bartlet, Ch. Engr., both of Seattle.

OREGON CITY, ORE.—The Oregon City, Molalla & Southeastern Electric Ry. is reported to be making preliminary surveys for its proposed electric line in Clackamas county. W. H. Burghardt was granted a franchise to build in this county several months ago. N. O. McLaughlin, Gen. Mgr.; J. Henry Smith, Ch. Engr.

SANTA MONICA, CAL.—Grant Bros., San Francisco, are stated to have received the contract for grading a new line for the electric railway between 27th and Barrett Sts.

BERLIN, ONT.—W. H. Breithaupt, owner of the Berlin & Waterloo Electric Ry., is said to contemplate the extension of this line through German Mills, Doon and Blair to Galt.

ST. JOHNS, NEWFOUNDLAND.—W. G. Reid, 30 St. John St., Montreal, Que., who holds the general contract for street railway construction in this city, is reported to have let the contract to the Westinghouse Co. for electrical equipment; to the Canada Switch Co., for trucks; the Stillwell-Bierce & Smith-Vaile Co., for hydraulic machinery.

ELECTRIC LIGHT AND POWER.

ROCKPORT, MASS.—This town has voted against building a plant. The committee consists of Geo. I. Farr, Jno. E. Knowlton and H. P. Wills.

HARTFORD, CONN.—A. C. Rice, Consult. Engr., Dayton, O., has prepared plans and specifications for developing a water power and building a power station on the Farmington River, near Tariffville, Conn., for the Hartford Electric Light Co., Hartford, and the contracts were placed, April 26. The Engineering Contract Co., 41 Broadway, New York, was awarded the contract for the dam and power station. The Stilwell-Bierce & Smith-Vaile Co., Dayton, O., the contract for the wheels, governors, feeder, waste gates and racks, and the Westinghouse Electric & Mfg. Co., Pittsburg, the electrical machinery. The plans call for a concrete dam about 35 ft. high, with the power station of concrete, steel and brick. There will be two generators of 1,000 HP. each and two exciters of 46 HP. each, with a traveling crane to handle all the parts. The power station will be heated with hot water radiators, and the machinery will be cleaned with compressed air.

NEW HAVEN, CONN.—It is stated that a committee of the council has been appointed to inquire into the question of city ownership of gas, water and electric plants.

WALLINGFORD, CONN.—Bids are asked until June 1 for furnishing the materials and for constructing a plant, as stated in our advertising columns. I. W. Bull, Chn.

NEWARK, N. Y.—Bids are wanted by the village board until May 19 for lighting this place by electricity. Three companies have recently been granted franchises.

NYACK, N. Y.—Florent Verdin, of New City, N. Y., has been granted authority to furnish the county court house with 75 16-c. p. lights. He is reported to have applied for permission to light the town.

WATERVILLE, N. Y.—F. V. Smith, Village Clk., writes us that no contract has as yet been awarded for electric lighting. The board has figured thus far on $2,000 as a price for lighting. H. B. Sweet, of the Utica Electric Light Co., Utica, N. Y., has submitted estimates.

VINELAND, N. J.—Attorney General Grey has submitted to the council his opinion that the water franchise granted to Charles Keighley is not binding, and that the municipality may build its water-works. An ordinance providing for the issuance of $140,000 in bonds for water-works, electric lights and other improvements has been introduced.

DORRANCETON, PA.—It is proposed to build a plant jointly with Luzerne. Councilmen Kileen, of Luzerne, Pa., and C. B. Johnson, of Dorranceton, may be addressed.

PERKASIE, PA.—This place will vote, June 6, on the question of issuing $15,000 in bonds for a plant.

READING, PA.—The United Power & Transportation Co. has purchased the plants of several traction and light companies. It is stated that the Philadelphia Electric Storage Battery Co., 1004 Walnut St., Philadelphia, has the contract for furnishing batteries in which it is proposed to store power for electric lighting, to be secured from a plant to be built on the Schuylkill River.

DOVER, DEL.—The council has instructed the committee to engage an engineer to prepare plans for a plant.

NEWARK, DEL.—David C. Rose, Jr., who represents a syndicate, wants to purchase the plant and water-works.

WILLIAMSPORT, MD.—It is reported that bids will be wanted about June 1 for constructing a plant, to cost about $6,500.

SHEPHERDSTOWN, W. VA.—Jno. L. Livers, Harper's Ferry, W. Va., writes us that he has just received the franchise for a plant and the contract for city lighting. Work on the plant will probably be begun soon. Estimated cost, $10,000.

SPARTANBURG, S. C.—F. D. McEwen has been granted a 40-year franchise and has also been awarded the 10-year contract for electric lighting.

DECATUR, GA.—It is stated that Lawrence Everhart proposes to build a water power plant with a capacity for 100 arc and about 300 incandescent lights.

GAINESVILLE, GA.—A company is being organized to build a plant, the dam for which will cost about $30,000, on the Chattahoochee River. Capital stock, $100,000. D. E. Evans, 9 East Spring St., Gainesville.

NEW ORLEANS, LA.—Bids are asked until June 18 for operating machinery and power house for the improvement of Plaquemine Bayou, La. Maj. Jas. B. Quinn, U. S. Engr., Custom House, New Orleans.

WINONA, MISS.—The council is reported to have let the contract for building a plant, it to be in operation by Sept. 1.

JONESBORO, TENN.—This place has been granted authority to issue $10,000 in bonds for a plant, according to reports.

DANVILLE, KY.—Bids are asked June 20 for lighting the streets of this city with electricity, as stated in our advertising columns. H. E. Woolfolk, Chn.; J. B. Fisher, Mayor.

JEFFERSONVILLE, IND.—The Jeffersonville Light, Gas, Heating & Coke Co., the present lighting contractors, and the Wayne Engineering & Construction Co., Fort Wayne, Ind., submitted bids May 6 for electric lighting. Both companies offered to furnish light, but after a certain term of years the plants are to become the property of the city. The local company offered to sell its plant for $15,000, and the Fort Wayne company offered the plant, after ten years, at prices ranging from $22,400 to $40,400, according to the capacity of the plant.

MARION, IND.—Beni. F. Burk, of the Marion Window Glass Co., and Wm. H. Anderson, have been granted a 40-year franchise for a plant, work on which will begin at once.

VINCENNES, IND.—Bids are asked until May 22 for furnishing 165 arc lights and 175 gas lights for 10 years, from April 29, 1900, and Dec. 25, 1900, respectively. Chas. Langel, Cy. Clk.

LAWRENCE, MICH.—This place is reported to have abandoned the project of putting in a plant.

PETOSKEY, MICH.—It is stated that the council has let the contract for the electric apparatus for the plant to the General Electric Co., Schenectady, N. Y., at $10,400.

THREE OAKS, MICH.—This place has been granted permission to extend the plant.

HIGHLAND, ILL.—Jno. Len, Mayor, has appointed J. G. Bardill, L. O. Kuhnen and Geo. Klein a committee to investigate the question of building a plant to cost about $10,000. Mr. Bardill, Chn., writes us that it is not known whether a new contract will be made or a plant built. The committee wishes to secure further information.

WAUKEGAN, ILL.—The Waukegan Electric Light Co. has been awarded a new 5-year contract for public lighting. The city has the privilege of buying the plant after a certain terms of years. The company has asked for permission to furnish heat and power.

IOWA CITY, IA.—The Iowa City Electric Light Co. is reported to have let the contract for the new building at Coralville, and will soon let the contract for the new machinery.

MECHANICSVILLE, IA.—Bids are asked until June 1 for lighting the streets with 25 50-c. p. incandescent lights, according to reports. L. L. Kennedy, Mayor.

PRINCETON, MINN.—Chas. F. Loweth, 94 East 4th St., St. Paul, Minn., is reported as preparing plans for a plant and water-works.

CREIGHTON, NEB.—It is stated that the Creighton Electric Light & Power Co. proposes to build a new plant on the creek near here. Address Frank Schneider.

FALLS CITY, NEB.—The council is reported as considering the question of improving the plant. It has already asked for bids for extending the water mains.

HASTINGS, NEB.—John M. Ragan, Hastings, and D. E. Thompson, of Lincoln, Neb., have applied for a 50-year franchise for a plant to cost about $70,000.

STERLING, NEB.—Jas. Livingston writes us that the project to build a plant and water-works has been dropped for the present.

WINNEMUCCA, NEV.—Chas. Haws, of Tuscarora, Nev., is reported as making arrangements for constructing the plant.

PLACERVILLE, CAL.—The El Dorado Power Co. has been granted a franchise for a plant to be erected at the junction to Rock Creek and American River. About 2,000 HP. will be developed. W. A. Bell, Pres.

SACRAMENTO, CAL.—Bids are asked until June 7 for the privilege of erecting poles and transmission power line in this county. W. B. Hamilton, County Clk.

SAN FRANCISCO, CAL.—Press reports state as follows regarding the arrangement between the Standard Electric Co. and the San Francisco Gas & Electric Co., whereby the first-named company is to furnish the local corporation with electricity for light and power. In the first place the entire system is to be duplicated from the power house at Blue Lakes City to Oakland, San Jose, and San Francisco, and the water supply and the plant are to be more than doubled in capacity. Another canal is to be constructed to parallel the present one (the Amador Canal) at a higher level, but with a capacity of 5,000 ins., giving 10,000 HP. A new power plant also is to be built, which, instead of having a force of 1,040 ft., will have one of 1,400 ft. Power is to be supplied to traction lines, besides furnishing electricity for lighting, and power to companies of Stockton, Oakland, San Jose and other intervening places.

SANTA ROSA, CAL.—The Clear Lakes Electric Light & Power Co. has been granted a franchise. The terms provide that the company pay to the city each year 3% of its gross receipts, the first payment to be made five years after the final passage of the ordinance.

RICHFIELD, UTAH.—An election will be held June 6 to vote on the question of issuing $6,000 in bonds for a plant.

MANAGUA, NICARAGUA.—Press reports state as follows: On April 19 the government of Nicaragua conceded to Herbert Savage, Saginaw, Mich., the right to utilize as much of the waters of Tipitape, a river having about 16 ft. fall, connecting Lakes Nicaragua and Managua, as may be needed for operating power and lights at the locality and in Managua, Masaya, and Granada, each about 20 miles distant. The concession is subject, however, to the previous rights granted to the Maritime Canal Co. It is also stipulated that his tariffs on passengers and freight on his trolley lines and for electric lights shall be approved by both the government of Nicaragua and the municipal governments of the cities named, all adjudications to be made by the judiciary of the government of Nicaragua. The concessionaire has the right to elevate the water in Lake Managua about 8 ft. by a dam across Rio Tipitape, during the short rainy season of each year, as a provision against the evaporation from the present level of the lake of over 5 ins. a month.

WOODSTOCK, ONT.—A committee has been appointed to consider the question of putting in a plant.

CIUDAD GUZMAN, JALISCO, MEX.—It is stated that over $20,000 of the $32,000 required for a plant has been subscribed. The specifications will soon be prepared and bids wanted by the municipal council.

BELFAST, IRELAND.—The Wheeler Condenser & Engineering Co., 120 Liberty St., New York, has been awarded the contract for the condensing plant to be used by the Belfast Electric Power Co. The Babcock & Wilcox Co., 29 Cortlandt St., New York, is said to have secured the order for pipe work for the plant.

TURIN, ITALY.—Press reports state that the La Societa Electrica Luce e Forza has been organized with a capital stock of $40,000 to put in a plant. The La Societa della Strade Ferrate Meridionale, also at Turin, is said to be preparing plans for a plant to utilize the water power of the Brombo by means of a canal; for this undertaking considerable machinery will be required.

BRIDGES

BUFFALO, N. Y.—Reports state that the Mayor has approved the bill providing for the erection of a 200-ft. span bridge, with an undershot wheel, in Niagara River, to be built by Alonzo C. Mather.

CHENANGO FORKS, N. Y.—It is stated that a meeting is to be held to decide the question of building a new iron bridge across the Chenango River.

NIAGARA FALLS, N. Y.—Reports state that the cantilever bridge over the gorge is to be strengthened with a new pier on either shore upon which will be constructed a belt in the center of each tower to carry the new truss under the center of the bridge.

IRONDEQUOIT, N. Y.—It is reported that the location for the proposed bridge is being considered.

ROCHESTER, N. Y.—It is stated that Governor Roosevelt has signed a bill providing for the erection of a new steel structure over the canal, at West Ave.; appropriation, $75,000.

ST. JOHNSVILLE, N. Y.—Reports state that an overhead crossing and a new bridge are to be constructed.

SANDY HILL, N. Y.—It is reported that the contract for constructing a steel bridge over the Glens Falls feeder has been awarded to Monty, Higley & Barber, of Sandy Hill.

WATERVLIET, N. Y.—It is reported that a bill passed by the Legislature is now before the Governor, providing for the construction of a bridge across the Hudson River, between this city and State St., Troy.

NEW KENSINGTON, PA.—Reports state that the contract for the new bridge over the Alleghany River between this place and Boquet station, on the West Penn. R. R., has been let to Stratton, Lewis & Co., of Pittsburg, for masonry work, and the Schultz Bridge Co. for the steel structural work.—It is reported that another bridge is to be erected in New Kensington about a mile and a half north of the bridge already being constructed. Plans will soon be submitted and bids asked for; estimated cost, $150,000. T. A. Mellon is interested.

PHILADELPHIA, PA.—It is stated that plans are being prepared for repairing the draw of Penrose Ferry bridge.

PHILADELPHIA, PA.—Bids are asked by the Department of Public Works, until May 19, for the reconstruction of the superstructure of the drawbridge at Orthodox St. and Frankford Creek.

TOWANDA, PA.—Bids are asked until June 1 for the following bridges: A high truss riveted span, 90 ft. long, askew 30°, roadway 18 ft.; one low truss riveted span, 45 ft. and 17.5 ft. spans, roadway 14 ft.; a deck beam bridge, 22 ft. 7 ins. long, askew 30°, roadway 52 ft. David A. Keefe, Designing Engr., Athens, Pa.

WYALUSING, PA.—Bids are asked until June 2 for one 44 ft. × 12 ft. steel highway bridge. David A. Keefe, Designing Engr., Athens, Pa.

BALTIMORE, MD.—Reports state that the County Commissioners have decided to erect two new bridges; one over the Philadelphia, Wilmington & Baltimore Ry. on Wilkens Ave., and one over Long Green Run, in the Eleventh district.

PETERSBURG, VA.—The Richmond, Petersburg & Carolina R. R. Co. will construct iron bridges across the Appomatox River, in Petersburg; across Swift Creek, near Petersburg; across James River, between Manchester and Richmond; across Nottoway River, Meherrin River and Roanoke River, according to reports. Gen. J. S. Negley, Vice-Pres. and Gen. Mgr., 141 Broadway, New York.

CLEVELAND, O.—Bids are asked by the Board of Park Commissioners, until May 24, for constructing a masonry arch under St. Clair St. for the main drive of the Brookway division of Rockefeller Park.

DAYTON, O.—Bids are asked until May 31 for furnishing the material and constructing a steel girder bridge across the Miami and the Erie Canal at Wayne Ave., as stated in our advertising columns. Robt. H. Ferguson, Comptroller.

MANSFIELD, O.—Bids are asked until May 29 for furnishing the necessary labor and material in constructing wing walls to the arch over and across Ritter's Run on Ritter St. F. W. Remy, Cy. Clk.

NORWOOD, O.—Reports state that the County Commissioners have ordered plans and specifications for rebuilding the bridge over the Baltimore & Ohio R. R.; estimated cost, $30,000.

PAINESVILLE, O.—Reports state that the county commissioners have decided to issue $35,000 of bonds for bridge purposes.

SOMERVILLE, O.—On May 8 the county commissioners decided to ask for bids for a new $21,000 bridge over Seven Mile creek.

PLYMOUTH, IND.—Bids are asked until June 8 for constructing a bridge and repairing stone abutments of a bridge over Pine Creek, Polk township. Fred'k Seidler, Chn. County Comrs.

GRAND RAPIDS, MICH.—D. W. Hunter, Mayor's Secy., writes us that there is some talk of a new bridge at Bridge St., to be about 550 ft. in length.

HUMBOLDT, IA.—Bids are asked until June 6 for a steel bridge, according to reports. Harwood Sharp, County Audr.

ST. PAUL, MINN.—It is reported that the following contracts have been awarded for the work on the Wabasha St. and Raymond Ave. bridges: William S. Hewitt, the temporary structure to be used during the reconstruction of the Wabasha St. bridge, at $7,505; A. C. Bell, Raymond Ave. bridge superstructure, $38,970; Wabasha St. bridge, substructure to Charles Stone, at $49,915; Raymond Ave. bridge substructure to Butler-Ryan Co., at $9,205.

WASECA, MINN.—Bids are asked until 10 a. m., May 10, for the construction of seven steel bridges in Waseca county. P. J. McLoone, Cy. Clk.

FULLERTON, NEB.—Bids are asked until June 16 for a steel bridge 60 to 70 ft. in length, with 14-ft. roadway. G. W. Ellsworth, County Clk.

HOT SPRINGS, ARK.—Bids are asked until June 1 for a steel highway bridge at Garner's Ferry, according to reports. S. P. Van Patten, County Bridge Comr., 316 Prospect Ave.

BROOKINGS, S. DAK.—Bids are asked until June 1 for two steel or combination bridges, according to reports. L. H. Storgaard, County Audr.

SEATTLE, WASH.—The question of constructing a drawbridge over the east waterway is being considered, according to reports.

FERGUS, ONT.—Reports state that the council has decided to build a steel bridge near Wilson's Mills, span of 135 ft.; cost, $3,000; plans will be prepared and bids asked immediately.

BUILDINGS.

CONCORD, N. H.—C. L. Fellows, Concord, is reported to have received the contract for erecting several buildings for the State Insane Asylum, at $27,300.

ST. JOHNSBURY, VT.—Bids are asked until May 27 for erecting a 2-story brick school building in this town. Arthur F. Stone, Clk. Bd. of Education; Packard & Tyrie, Archs., St. Johnsbury.

BOSTON, MASS.—Bids are asked until May 24 for erecting a chapel, administration building and gateway at Mt. Hope Cemetery; bond, $10,000; J. Albert Brackett, Chn. of Cemetery Trustees, City Hall.——Bids are asked by the school committee of this city until May 22 for a plumbing system in the Mechanic Arts High School. Ed. J. Aldrich, Chn. of Com.

SPRINGFIELD, MASS.—Bids are asked by the commissioners of Hampden county, until May 24 for alterations at the court house, Springfield. Robt. O. Morris, County Clk.; Edward Walther, Arch., Holyoke, Mass.

WESTFIELD, MASS.—Plans are asked until May 19 for a new 10-room training school building to be erected for the Westfield State Normal School. Joel D. Miller, Chn.

MIDDLETOWN, CONN.—Bids are asked by the council until May 27 for erecting a combination fire house on Main St. O. H. Cone, Alderman; J. D. Sibley, Arch.

BROOKLYN, N. Y.—The following bids were received at the Navy Pay Office, New York, May 9, for a store house at the Naval Laboratory, Brooklyn: W. G. Triest, 39 Cortlandt St., New York (accepted), $3,460; W. J. Moran, $3,545; P. J. Carlin & Co., Brooklyn, $3,832; L. W. Seaman, Jr., & Son, 133 Grand Ave., Brooklyn, $4,200.

BUFFALO, N. Y.—Plans have been prepared for a new store building to be erected at 391 and 393 Main St. for the Stevenson Estate. Green & Wicks, Archs.

ELLIS ISLAND (N. Y. H.), N. Y.—The following bids were received by the supervising architect, Washington, D. C., May 16, for erection and completion (except heating apparatus and electric wire conduits and wiring) of the kitchen and restaurant building and the disinfection bathhouse and laundry at the U. S. Imigrant Station on Ellis Island: L. L. Lach & Son, Chicago, Ill., $87,860, 10 mos.; Jno. Thatcher, Brooklyn, N. Y., $115,790; 10 mos.; P. J. Carlin & Co., Brooklyn, N. Y., $104,900, 9 mos.; W. G. Triest, New York, $94,500.

FULTON, N. Y.—Carpenter & Williams, Norwich, Conn., are reported to have received the contract for constructing the main buildings of the Nestle Food Co.'s plant at Fulton, to cost about $40,000.

NEW YORK, N. Y.—The following architects have been invited by the supervising architect, Washington, D. C., to compete for the furnishing of plans for the new custom house building to be erected in this city: McKim, Mead & White, 160 5th Ave.; Geo. B. Post, 33 East 17th St.; Bruce Price, 150 5th Ave.; Carrere & Hastings, 44 Broadway; Francis H. Kimball, 66 Broadway; James B. Baker, 154 5th Ave.; Cady, Berg & See, 31 East 17th St.; Clinton & Russell, 32 Nassau St.; Robert W. Gibson, 18 Wall St.; Israel & Harder, 194 Broadway; Babb, Cook & Willard, 874 Broadway; H. J. Hardenburgh, 10 West 23d St.; Cass Gilbert, Tremont Bldg, Boston, Mass.; Trowbridge & Livingston, 287 4th Ave.; George Martin Huss, 1285 Broadway; Howard, Cauldwell & Morgan, 10 East 23d St.; Peabody & Stearns, 143 Liberty St.; Shipley, Rutan & Coolidge, Boston, Mass.; D. H. Burnham & Co., Chicago, and Henry Ives Cobb, Chicago, Ill. All of New York except otherwise stated.——Plans have been filed by E. M. Stavey, 198 Centre Ave., New Rochelle, N. Y., for five 5-story brick dwellings on 119th St., near Broadway, to cost $112,000. Brower & Gayle, Archs., 2,787 Broadway; by Henry Corn, 142 5th Ave., for a 10-story brick store and loft building at 95 5th Ave., to cost $125,000. Robt. Maynicke, Arch., 725 Broadway; by Wm. Drought, 216 West 104th St., for a 6-story brick flat building at 5th Ave. and 127th St., to cost $100,000. Neville & Bagge, Archs.; by A. E. & M. A. Bingham, 16 East 116th St., for an 8-story brick flat and store building on 80th St., near Columbus Ave., to cost $180,000. A. M. Hedley, Arch.; by H. M. Weed, 57 West 95th St., for four 4-story brick dwellings on 105th St., near West End Ave., to cost $100,000. Janes & Leo, Archs.; by Muric Cook, 203 West 117th St., for five 4½-story brick dwellings on 113th St., near Amsterdam Ave., to cost $90,000. H. F. Cook, Arch.; 109 West 42d St.; by Behnken Bros., 966 Forest Ave., for five 5-story brick tenement buildings on 133d St., near Amsterdam Ave., to cost $100,000. Lawrence & Ringrose, Archs.; by Adolph Mandel, 157 Rivington St., for three 6-story brick flat and store buildings at 118 to 122 Sheriff St., to cost $81,000. G. F. Pelham, Arch., 503 5th Ave.; by Jas. Fitzpatrick, 312 East 95th St., for a 6-story brick flat building on 93d St., near Madison Ave., to cost $80,000. Frederick Jacobson, Arch.; by H. B. Hollins, 15 Wall St., for a 5-story brick dwelling at 12 and 14 West 56th St., to cost $75,000. McKim, Mead & White, Archs., 160 5th Ave.

NEW YORK, N. Y.—The following bids were received by the department of charities, May 11, for plumbing and drainage of the new city prison, Borough of Manhattan: Wells & Newton Co., 231 Eldridge St., $77,450; Howe & Bassett, Rochester, N. Y., $78,900; L. D. Hosford, 68 Beekman St., $81,270. All bids have been rejected and work will be readvertised.

BUTLER, PA.—The commissioners of Butler county have accepted the plans of Owlsley & Boucherle, Youngstown, O., for new buildings for the poor farm, to cost about $61,000. Contracts will soon be let.

MONESSEN, PA.—Bids are asked until May 20 for erecting a public school building at this place. M. H. Barmes, Secy. School Bd.

NORRISTOWN, PA.—Bids are asked until May 24 for the completion of the new high school building. Geo. R. Kite, Chn., 1533 De Kalb St.

PHILADELPHIA, PA.—It is announced that plans for special buildings for transportation, exhibits and agricultural machinery, with additional temporary structures, connected with the main building of the Exposition of Trades and Commerce have been agreed upon by the building committee of the Philadelphia Museums, and John Birkinbine, Engineer-in-Chief, has been directed to proceed actively with the work.

READING, PA.—L. H. Focht has been awarded the contract for erecting a new barn for the almshouse of Berks county, at $9,680.

WASHINGTON, D. C.—Bids are asked by the department of agriculture, Washington, D. C., until May 22 for erecting brick additions to the present annex buildings of the weather bureau. James Wilson, Secy. of Agriculture.——Bids are asked by the supervising architect, Washington, D. C., until June 15 for repairs to the heating and power plants in U. S. Treasury Bldg., Winder Bldg., and U. S. Marine Hospital Service (Butler) Bldg.

NEWPORT NEWS, VA.—Peddicord & Co. have been awarded the contract for erecting a building for the First Presbyterian Church, at $23,437. Chas. W. Bolton & Co., Archs., 1007 Witherspoon Bldg., Philadelphia, Pa.

SALISBURY, N. C.—Bids are asked until May 29 for erecting an addition, with fireproof record rooms, to the present court house in Rowan county. J. Frank McCubbins, Chn. County Comrs.

SAVANNAH, GA.—Bids are asked until May 31 for constructing a set of officers' quarters at Fort Pulaski, Ga. John Simpson, Deputy Q. M., U. S. A., Savannah, Ga.

TAMPA, FLA.—Edenfield & Jetton, Tampa, are reported to have received the contract for erecting the proposed government buildings at Egmont Key, where new fortifications are being built; estimated cost, $50,000.

BIRMINGHAM, ALA.—Plans have been accepted for the hospital building to be erected at 4th Ave. and 18th St., for Hillman Hospital. Walter & Ullman, Archs.

PULASKI, TENN.—The Pauley Jail Bldg. Co., St. Louis, Mo., has been awarded the contract for erecting the new jail building, at $9,867.

NEWPORT, KY.—Bids are asked until June 14 for the construction (except heating apparatus, electric wiring and conduits) of the U. S. post office building in this city, as stated in our advertising columns. Jas. Knox Taylor, Supervising Arch., Washington, D. C.

ARCANUM, O.—Bids are asked until May 20 for erecting a 3-story brick building, 49 × 90 ft., for the I. O. O. F.; deposit, $1,000. M. E. Wild, Pres. of Com.

ELLERTON, O.—Bids are asked by the board of education of Jefferson township, until June 3, for erecting a school building at Ellerton. A. L. Eberly, Clk.

HAMILTON, O.—Bids are asked until May 30 for installing a passenger elevator in the court house at Hamilton. H. C. Gray, County Audr.

LAFAYETTE, O.—Bids are asked until June 10 for erecting a 2-story brick town hall at this place. Address C. N. Biteman, Township Clk., Herring, O.; Leech & Leech, Archs., Lima, O.

TOLEDO, O.—Plans have been accepted and bids will soon be asked for a new school building to be erected on Waite Ave. Wachter & Hudson, Archs.

INDIANAPOLIS, IND.—Competitive plans and estimates are asked by the school commissioners of this city until May 25 for the erection of school buildings for the year 1899-1900.

SOUTH BEND, IND.—Bids are asked until May 19 for erecting the Laurel school building. John Cassidy, Secy.; Dirham & Schneider, Archs.

TERRE HAUTE, IND.—August Fromme has been awarded the contract for erecting a business building at Main and 5th Sts. for D. P. Erwin, Indianapolis, to cost about $45,000. Floyd & Stone, Archs.

DETROIT, MICH.—Bids are asked by the board of education, 50 Miami Ave., until May 23, for erecting a 12-room school building at 24th St. and Chope Place, and a 12-room school building on the site of the present Franklin School; also for ten steam boilers, and for automatic stokers for ten boilers. L. H. Chamberlain, Secy.

BEMENT, ILL.—Bids are asked until May 22 for a 12-room school building. J. T. Moore, Clk. Bd. of Education; Reeves & Baillie, Archs., Peoria, Ill.

CHICAGO, ILL.—Plans have been accepted, according to reports, for a new church building to be erected at Lexington Ave., and 62d St., for the Lexington Ave. Baptist Church, to cost $20,000. M. P. Boynton, Pastor.——A building permit has been granted J. W. Sweet and Wm. H Harper for two apartment buildings at 3765 to 3809 Grand Ave., to cost $64,000.

DANVILLE, ILL.—Bids are asked until May 31 for erecting a building for headquarters at the Danville branch of the National Home for Disabled Volunteer Soldiers; also for erecting coal and ash conveyor, hoppers, engines, etc., for the boiler house. Wm. C. Gunnell, Engr., Danville.

WHITEHALL, WIS.—We are informed that the following bids were received May 9 for erecting an asylum building for Trempealeau county, in this city: John Charles, State Arch., Menominee, Wis.:

*Hackworthy Construction Co., Appleton, Wis.	$35,700
†Brown & Son, New Richmond, Wis	37,490
Bonnett & Michle Co., Milwaukee, Wis	48,895
H. & F. Roettinger, Fountain City, Wis	49,890
H. S. Pelton & Co., Milwaukee, Wis	49,180
Hinckley & Powers, Green Bay, Wis	45,000
Krautz & Fredler, Winona, Minn	50,210
Brown Bros. Co., West Superior, Wis	48,515

*Accepted, without plumbing and heating.
†Without plumbing and heating.

DES MOINES, IA.—Gabriel Anderson has received the contract for erecting the first wing of the new Dr. Still College of Osteopathy at West 15th and Locust Sts., at $16,300. Hallett & Rawson, Archs.

FAIRMONT, MINN.—The Diebold Safe & Lock Co., Canton, O., has been awarded the contract for erecting the county new jail and sheriff's residence, at $9,186.

MINNEAPOLIS, MINN.—Bids are asked until May 29 for erecting a building for horticulture and physics for the University of Minnesota, and for additions to the heating and lighting plant. J. S. Pillsbury, Pres. Bd. of Regents.

TEKAMAH, NEB.—Bids are asked until May 30 for erecting a 9-room school building in this city. G. W. Green, Secy. Bd. of Education.

WAYNE, NEB.—Rowles & Moore, Omaha, Neb., has received the contract for building the new Wayne county court house, at $25,600, according to reports.

DEVIL'S LAKE, N. DAK.—Bids are asked until June 6 for a heating plant for the School for the Deaf at this place. L. H. Larson, Secy. Bd. of Trustees; Hancock Bros., Archs., Fargo, N. Dak.

BUTTE, MONT.—Reports state that the contract for the erection of two dormitory buildings and sewer and water system for the Fort Peck Indian school has been awarded to Edward Wagner, Helena, Mont., at $34,015.

KANSAS CITY, MO.—The 5-story warehouse of the Newby Transfer & Storage Co., at 1216 and 1218 Union Ave., was destroyed by fire May 10; loss, $90,000.

LITTLE ROCK, ARK.—Bids are asked by the Board of State Charitable Institutions, Little Rock, until June 2 for erecting an infirmary building at the State Lunatic Asylum. F. W. Gibb, Arch., Reider Bldg., Little Rock.

FORT WORTH, TEX.—Smith & Barden, Fort Worth, have been awarded the contract for erecting a proposed union station for the Gulf, Colorado & Santa Fe Ry. and the Houston & Texas Central Ry., to cost about $70,000.

SAN ANTONIO, TEX.—Bids are asked until June 5 for erecting a market house and convention hall on Pascha Plaza; check, $1,000; estimated cost, $45,000. Marshall Hicks, Mayor; A. Giles, Arch., 114 West Houston St.

WALLA WALLA, WASH.—The following bids are stated to have been received May 1 for erecting (a) the Memorial Building, and (b) a dormitory building for the Whitman College: E. R. Parks, (a) stone, $47,000; brick, $46,294; (b) $22,051; both of stone, $69,000; brick, $67,745. Halter & Kickleson, (a) stone, $46,750; brick, $45,595; (b) $24,126; both of stone, $69,700; J. B. Bridges, Portland, (a) stone, $46,235; brick, $45,004; (b) brick, $25,647; both of stone, $70,700; brick, $67,000. Peacock, San Francisco, (a) stone $51,657; brick, $49,809; (b) brick, $28,838. Bailey & Cox (a) stone, $46,000; brick, $45,039; (b) $23,217; both of stone, $69,256; brick, $68,256. A. Osterman, (a) stone, $47,080, brick, $46,080; (b) $23,220; both of stone, $68,100.

SITKA, ALASKA.—Bids are asked until May 31 for erecting the headquarters building for the agricultural experiment station at Sitka. C. C. Georgeson, Agent in Charge.

LONDON, ONT.—Bids are asked until May 22 for erecting a church building on Oxford St., for St. James Presbyterian Church. N. McNeil, Chn. of Com.; H. Matthews, Arch., London.

HARROGATE, ENGLAND.—Plans are asked until July 3 for a new kursaal to be erected here in connection with the Spa Concert Room, to cost about £20,000 ($100,000). Premiums, £150, £100 and £75. S. Stead, Clk.

PLUMSTEAD, ENGLAND.—Designs are asked until July 27 for the proposed municipal buildings and public library; estimated cost, £40,000 ($200,000). Premiums £100, £75 and £50. Edwin Hughes, Vestry Clk.

WATER-WORKS.

CLINTON, MASS.—Bids are asked by the Metropolitan Water Board, 3 Mount Vernon St., Boston, Mass., until June 9, for soil excavation for the Wachusett reservoir in Clinton, and until June 6 for a drainage system for Spec Pond, as described in our advertising columns. Bids will be wanted in June for improving Spot Pond. P. F. Stearns, Ch. Engr.; W. N. Davenport, Secy.

LONGMEADOW, MASS.—The legislature has legalized the issuance of $30,000 in bonds for a new water supply.

NEW BEDFORD, MASS.—The water board has ordered 162 new water meters.

NORTH MIDDLEBORO, MASS.—The question of forming a company to build works to cost about $20,000 is being considered.

WILLIMANTIC, CONN.—The following were the only bids received May 8 for furnishing and erecting a new water power pumping plant at the Natchaug pumping station: The Barr Pumping Engine Co., Philadelphia, $8,000 and $6,300 for a plant 14½ × 18. Henry R. Worthington, Brooklyn, N. Y., $8,900 for a plant 13 × 18 and $7,000 for 14 × 18.

BAINBRIDGE, N. Y.—This place voted May 6 to issue $9,000 in bonds for the purchase of the works.

BALLSTON SPA, N. Y.—An election will be held May 23 to vote on the question of issuing $50,000 in bonds for extending the works and the stand-pipe.

BORDER CITY, N. Y.—The Seneca Springs Water Co. has been incorporated, with a capital stock of $10,000, by O. J. C. Rose, Geo. F. Ditmars and C. S. Coleman.

CALEDONIA, N. Y.—This place has voted to lay pipes to the Pittsburg & Lehigh Junction, at a cost of $2,500, for supplying the railway with 60,000 gallons of water a day.

LANSINGBURGH, N. Y.—It is probable that bids will be wanted by the water commissioners June 15 for constructing the new reservoir.

NYACK, N. Y.—Louis L. Tribus, 84 Warren St., New York, has been retained as consulting engineer in the matter of improving the works and of completing a sand filtration plant. G. N. Houston, Supt. and Res. Engr.

ROCHESTER, N. Y.—The council has been petitioned to lay water mains in a number of streets, at a cost of about $68,000.

SAVONA, N. Y.—T. C. Wall, Village Clk., writes us that a special election to vote on the question of building works will soon be held. The water supply will be secured from wells. Population, 700. J. F. Witmer, Engr., Ellicott Square, Buffalo, N. Y.

SCHENECTADY, N. Y.—Bids are asked until May 22 for furnishing 500 net tons of cast-iron water pipe and 10 tons of special castings, and for laying the same. John McDermott, Chn. Water Comrs.

SCHUYLERVILLE, N. Y.—Geo. P. Slade, Glen's Falls, N. Y., is preparing plans for works for this place.

TONAWANDA, N. Y.—The municipal board has recommended the purchase of a new pumping engine, to cost about $26,000.

TUPPER LAKE, N. Y.—Bids are asked until June 1 for constructing two to five miles of pipe for the works for the Tupper Lake Water Co., as stated in our advertising columns.

WHITEBORO, N. Y.—The Whitestown Water Works Co. has been incorporated, with a capital of $50,000, by Henry W. Miller, Utica; Wm. C. Stone, James Corbitt and C. H. Williamson, Whitesboro.

WHITE PLAINS, N. Y.—The following bids were received by the commissioners May 12 for constructing the storage reservoirs, as advertised in Engineering News: Hugh Reilly, White Plains (accepted), $46,880; M. J. Dady, Brooklyn, $49,401; Duffy & McCabe, White Plains, $51,874; John O'Rourke, White Plains, $52,574; P. J. Curran, Yonkers, $52,703; W. J. Hannagan, New York, $53,661; James Duell & Co., Tarrytown, N. Y., $55,022; Alex. S. Traub, White Plains, $55,326; R. B. Lewis & Co., $58,882; Bart. Dunn, New York, $59,573; Gildersleeve & Dougherty, New York, $59,997; Farrell & Hopper, New York, $60,794; Floyd & Sherril, Sandy Hill, N. Y., $61,499; Charles Sillery, Mount Vernon, N. Y., $65,238; Troy Public Works Co., Utica, $65,797; Hann & Phillips, New York, $66,940; Erbeck Bros., Homestead, Pa., $72,909.

NEWARK, N. J.—Bids are asked until 3:30 p. m., May 18, for furnishing 2,546 ¾ to 4-in. circular reading disc water meters, with connections. M. R. Sherrerd, Engr. and Supt. Water Dept.

DOYLESTOWN, PA.—The following submitted bids May 11 for sinking artesian wells for a new water supply: W. B. Sutton, Doylestown; Thos. B. Heayser, Jenkintown; D. W. Twining, Ivyland; Geo. J. Kennedy, Philadelphia.

INDIANA, PA.—The Clymer Water Co. is reported to have let the contract for 2¼ miles of water pipe to the Chester Pipe & Tube Co., Chester, Pa. A new reservoir is also to be built, the improvements to cost about $20,000.

LANCASTER, PA.—H. K. Myers, of the council, writes us that it is expected that the present stand-pipe or part thereof will be replaced this year. An attempt is being made to put in an item of $15,000 in appropriation ordinance now pending for new stand-pipe.

LEBANON, PA.—Bids will soon be asked by the council for laying new water mains, to cost about $2,000.

MEDIA, PA.—Bids are asked by the American Pipe Mfg. Co., Fidelity Mutual Life Association Bldg., Philadelphia, until June 1, for constructing a 10,000,000-gallon sedimentation reservoir near Medina, as described in our advertising columns. J. W. Ledoux, Ch. Engr.

NORTH BRADDOCK, PA.—Bids are asked until June 1 for furnishing the materials and for constructing works, as stated in our advertising columns. S. A. Taylor, Borough Engr., 339 5th Ave., Pittsburg, Pa.; Jno. Maxwell, Chn. Com.

PHILADELPHIA, PA.—The committee on hygiene of the council has decided to ask for bids for furnishing and placing about 285 galvanized cast-iron filters for the school buildings.

WHITEHALL, PA.—The Clear Springs Water Co. has been incorporated, with a capital stock of $200,000, of which $20,000 is paid in; Incorporators, H. B. Price, Treas., Upper Lehigh, Pa.; W. W. Watson, Scranton, Pa.; C. W. Seisler, Northampton, Pa.

BERRYVILLE, VA.—D. H. Jones, Mayor, and Councilman H. W. Baker, have been appointed a committee to employ an engineer to make estimates for completing the works, the construction of which was begun in 1891.

ROCKY MOUNT, N. C.—T. T. Thorne, Town Clk., writes us that $40,000 in bonds will be issued for works. It is not expected, however, that the improvement will cost more than $25,000. The water supply will be secured from wells.

BROWNSVILLE, TENN.—This place has voted to issue $27,500 in bonds for works.

CINCINNATI, O.—Bids are asked until June 13 for furnishing water pipe, castings, etc., for the settling reservoirs and for the pump mains for the new works, as stated in our advertising columns; estimated cost of pipe, etc., $194,000. C. G. Roth, Clk. Bd. Trustees; Aug. Herrmann, Pres.——A. J. Henkel has been awarded the contract for building the two reservoirs, at $1,171,744. The lowest bidders were Folz, Williard & Co., at $1,039,651, but they declined to accept the contract.

COLUMBUS, O.—The board of public works will ask for new bids for improving the Kickersville feeder of the Licking reservoir, to cost $5,000.

WINCHESTER, IND.—J. P. Miller & Co., Chicago, are reported to have been awarded the contract for building the works, which, with an electric plant, will cost about $50,000.

MACKINAC ISLAND, MICH.—Wm. Sullivan and others are reported to have been granted a franchise for works to furnish 1,500,000 gallons a day.

WEST BAY CITY, MICH.—J. D. Cook, Toledo, O., has been engaged to act with City Engineer Bloomshield in regard to new works.

CHICAGO, ILL.—Local papers state that estimates are being prepared by Superintendent Ryan of the water pipe extension bureau of the cost to lower all the water mains in Hyde Park, Lake and Lake View, which are so near the surface that they freeze in winter. About $100,000 will have to be appropriated for the work.

MURPHYSBORO, ILL.—Bids are asked until June 9 for constructing a steel water-tower, as stated in our advertising columns. Edward Flad, Consult. Engr., Laclede Bldg., St. Louis, Mo.

GREEN BAY, WIS.—C. E. Shaylor has submitted a proposition to sell works to this city.

MENASHA, WIS.—J. P. Miller & Co., Chicago; Wm. Breier, Kaukanna, Wis., and C. F. Youmans, Oshkosh, Wis., have asked for permission to build works to cost about $90,000.

PINE ISLAND, MINN.—Bids are asked until May 22 for furnishing the materials and for constructing the proposed works, as stated in our advertising columns. A. M. Patitz, Engr., Pabst Bldg., Milwaukee; J. E. Clark, Recdr.

PRINCETON, MINN.—Chas. F. Loweth, 94 East 4th St., St. Paul, Minn., is reported as preparing plans for works and an electric plant.

LESTERVILLE, S. DAK.—W. L. Bruce, Yankton, S. Dak., is reported to have been awarded the contract for building works at $3,500.

ARKANSAS CITY, KAN.—It is stated that May 28 is the last day on which the city will have the privilege of buying the works. So far the city has been unable to sell $95,000 of 5% 20-year bonds. Geo. L. Brown and A. A. Newman are on the committee.

ST. LOUIS, MO.—Bids are asked until May 26 for furnishing and laying and setting about 4,100 tons of 6 to 36-in. cast-iron water pipe, 250 tons of special castings, 192 6 to 36-in. stop valves, 300 fire plugs and top parts, etc. Robt. E. McMath, Pres. Bd. Pub. Improvements.

GRAND JUNCTION, COLO.—The mayor, city clerk and city treasurer have been authorized to sign the certificates for the sale of $65,000 in bonds, voted in 1897, for constructing works. It is reported as likely that work will soon be begun.

SHERIDAN, WYO.—Bids are asked until May 23 for constructing a water pipe line to the barracks near Sheridan. Marion McMillin, Constructing Q.-M., Sheridan.

LAKEVIEW, ORE.—An election was held May 15 to vote on the question of issuing $25,000 in bonds for works, according to reports.

SANTA ROSA, CAL.—The Santa Rosa Gas & Electrical Co. has applied for a franchise to put in works to supply 2,000,000 gallons of water a day.

GRAND MERE, QUE.—Bids were received May 10 for constructing works. C. J. E. Charbonneau, Secy.-Treas.

ALMONTE, ONT.—This place proposes to vote on the question of building works and a sewerage system.

BRUSSELS, ONT.—Bids are asked until June 1 for laying water mains, setting hydrants and for building a brick sewer. F. S. Scott, Clk.

STIRLING, ONT.—Bids are asked until May 23 for constructing works, to consist of 12,000 ft. of mains, from Oak Hill Pond to the town, 10,000 ft. of 4, 6 and 8-in. water pipe, hydrants, valves, etc. Galt & Speakman, Engrs., Canada Life Bldg., Toronto, Ont.; John S. Black, Town Clk.

IRRIGATION.

ANGLETON, TEX.—Reports state that Baker & Lewis, of Lake Charles, La., will construct an irrigation canal at Angleton, 60 ft. wide and several miles long, for the cultivation of rice lands; pumping plant will have capacity of 400,000 gallons.

NEW COMPANIES.—Santa Gertrudes Irrigation Co., Los Angeles, Cal.; $60,000, $500 paid in; S. R. Gunn, John Wood, Silas M. Lee, all of Whittier.

Rice & Trust Co., Des Moines, Ia.; $50,000; W. S. Goodell, B. D. Hurd, Alfred G. Bissell.

Val Verde Water Co., Val Verde, Cal.; $50,000, paid in, $1,000; J. L. Williams, Val Verde; F. J. Fogg.

SEWERAGE.

MIDDLEBORO, MASS.—Freeman C. Coffin, Boston, has submitted a report and estimates for the proposed system of sewerage and sewage disposal.

PITTSFIELD, MASS.—The question of building a sewage disposal plant is being considered by Mayor Whiting, Mr. Manning, of the board of public works, and Dr. Burton, of the board of health.

STOCKBRIDGE, MASS.—The following bids were received by the selectmen May 6 for constructing sewers: D. H. Parsons, Westfield (accepted), $12,708; Celestine DeMarco, New York, $13,143; Ley & Co., Springfield, $16,163. The contract calls for the construction of 3½ miles of main and branch sewers, together with flush basins and tanks, and manholes, the whole to be completed by Aug. 1. This does not include the disposal plant, which is to be built by the town. The latter will cover about 4½ acres in the lower part of the town.

BUFFALO, N. Y.—Bids are asked until May 25 for constructing 18 to 10-in. pipe sewers in certain streets. R. G. Parsons, Secy. Bd. Pub. Wks.

PORT JERVIS, N. Y.—At the coming election the question of issuing $4,000 in bonds for a surface water sewer will be voted upon.

RYE, N. Y.—The question of building a system is again being considered.

SYRACUSE, N. Y.—The following bids were received by the council May 9 for constructing the Butternut St. trunk sewer, to be 8 ft. in diameter: Brick, P. H. Lyons and J. P. Sullivan, $53,803; Frank S. Sposato, $48,317; John W. Bustin, $52,369; Chas. F. Taylor and Thos. F. Moore, $48,784; Geo. D. Grannis, $50,394; Martin & Sullivan, $59,148; Frederick J. Baker, $48,633; Edwin Lodder, informal. Web tile, Chas. F. Taylor and Thos. F. Moore, $46,596; John W. Bustin, $56,512; Matthew Dillon, $54,596; Geo. D. Grannis, $54,489; E. G. Gay, $48,778; Thos. Marnell, $45,009; P. H. Lyons and J. P. Sullivan, $50,333; Edwin Lodder, $49,502; Frank S. Sposato, $47,269; C. T. Hookway, $58,627.

WATERTOWN, N. Y.—An election will be held May 29 to vote on the question of issuing $51,575 in bonds for a trunk sewer. C. B. Muzzy, Cy. Clk.

HACKENSACK, N. J.—Bids are asked by the Hackensack Improvement Commission until June 5 for constructing about 932 ft. of 24-inch pipe sewer in Poplar Ave., with manholes, etc., as stated in our advertising columns. M. E. Clarendon, Pres.; L. Lozier, Engr., 1 Main St.

LEBANON, PA.—An engineer is to be engaged to prepare plans for a system. Councilmen Gerberich and Buck may be addressed.

NEW BRIGHTON, PA.—The council, it is reported, has asked for bids for a system.

SCOTTDALE, PA.—We are informed that this place voted May 6 to issue $34,000 in bonds, $5,000 of which is for extending the system.

WILKES-BARRE, PA.—This city has voted to issue $100,000 in bonds for paving, sewers, etc.

MILFORD, DEL.—T. Chalkley Hatton, Wilmington, Del., is reported as preparing plans for a system.

AUGUSTA, GA.—It is proposed to build about 2,200 ft. of 15 to 10-in. pipe sewers in two streets. C. A. Robbe, Mayor.

ALEXANDRIA, LA.—We are informed that this city contemplates an issue of bonds for constructing a system and paving certain streets. Ira W. Sylvester, Alexandria, has been appointed City Engineer, and ordered to prepare plans for a system. The use of the separate system is contemplated with disposal by pumping into Red River.

WELLSVILLE, O.—Riggs & Sherman, The Nasby, Toledo, O., have submitted plans and estimates for the proposed system, to cost about $110,000. Address Mayor Dennis and Councilman Bowes.

MACKINAC ISLAND, MICH.—Wm. Sullivan has been granted a franchise to put in a system and water-works.

LA CROSSE, WIS.—It is proposed to spend $10,000 for the Front St. sewer, and $15,000 for new water mains. Address Alderman Thompson and F. C. Powell, Cy. Clk.

MANITOWOC, WIS.—We are informed that it is proposed to build 5,000 ft. of 24-in. pipe sewer.

NEENAH, WIS.—This place, it is reported, is arranging to build a system, the outlet to be into the Menasha branch of the Fox River.

WAUWATOSA, WIS.—E. O. Hoyt, Mayor, is reported to have appointed S. J. Decker, Wm. von Baumbach and Chas. Breed a committee to investigate the question of building a system.——The county commissioners are also considering the question of building a new stystem of sewage disposal for the county buildings. Wm. Farries, Wauwatosa, T. Y. McGovern, South Milwaukee, and John L. Bohn, Milwaukee, are on the committee.

WAUSAU, WIS.—It is stated that plans are being prepared for a system for the west side. New sewers are proposed for four streets in the east side.

CEDAR RAPIDS, IA.—City Engineer Merridith is preparing plans for sewers for 8th Ave., etc.

DES MOINES, IA.—Bids are asked until May 30 for constructing 2,000 ft. of pipe sewers and about 2,660 sq. yds. of brick paving. G. A. Eberhart, Pres. Bd.

OSKALOOSA, IA.—The question of building new sewers is being considered.

SIGOURNEY, IA.—The Iowa Engineering Co., Iowa City, Ia., it is stated, is preparing plans for a system.

WILLIAMS, IA.—It is proposed to build a system, according to reports.

HIBBING, MINN.—The council, it is stated, has been petitioned to build a system.

ST. JAMES, MINN.—Bids are asked until 8 p. m., May 19, for constructing 4,000 ft. of pipe sewers. F. G. Hyatt, Cy. Clk.

ST. PAUL, MINN.—Bids were asked until May 15 for constructing a system in Hamline. The bids received May 4 was rejected, the lowest bidders being Preston & Kriegher at $45,400, and Kirkland & Deeks at $46,700. C. H. Bronston, Clk. Bd. Pub. Wks.

WAHPETON, N. DAK.—Bids are asked until May 26 for constructing about 1,760 ft. of egg-shaped and circular brick and about 12,728 ft. of 24 to 12-in. pipe sewers, according to reports. E. A. Aspinwall, City Audr.

OMAHA, NEB.—The council is considering an ordinance to issue $50,000 in bonds for new sewers.

CARROLLTON, MO.—Bids are asked until May 29 for constructing a system, as described in our advertising columns. Hiram Phillips, Engr., Lincoln Trust Bldg., St. Louis, Mo.; Jos. Dain, Jr., Chn. Com.

KANSAS CITY, MO.—The contract for building a section of the Vine St. sewer has been let to S. F. Schroeder at $13,753.

SEATTLE, WASH.—It is proposed to construct a trunk sewer to drain a section of the city lying between Denny's Broadway addition and Dennyway, to cost about $30,000. There is $160,000 worth of sewer and street work either under contract or planned for the coming season.

NEVADA CITY, CAL.—This place voted May 6 to issue $28,000 of 40-year 6% bonds for a system.

WATSONVILLE, CAL.—An election will be held June 10 to vote on the question of issuing $40,000 of 5% bonds for a system. E. F. Wyckoff, Pres. Bd. Trustees; R. S. Tuttle, Cy. Clk.; V. T. McCray, Engr.

NANAIMO, B. C.—Col. T. H. Tracy, of Victoria, B. C., has submitted a report on a system for this place, to cost $45,000.

VANCOUVER, B. C.—It is stated that bids will be wanted about June 1 for building a system, to cost about $100,000. T. H. Tracy, Cy. Engr.

HONOLULU, H. I.—The following contracts are said to have been let for furnishing the materials for the proposed system, as advertised in Engineering News: Cement, 6,500 lbs., W. K. Grace & Co., San Francisco, Cal.; pipe, 24 to 6-ins., 60,000 ft., Gladding, McBean & Co., San Francisco; 24-in. riveted steel or wrought iron pipe with flexible joints, 2,200 ft., Risdon Iron Works, San Francisco; cast-iron manhole covers, 180, Sessions Foundry Co., Bristol, Conn.; gate valves, Adams & Co., York, England. The other contracts have not yet been let. Bids are asked until June 1 for constructing the sewers, as stated in our issue of last week. Address Rudolph Hering Engr., 100 William St., New York, N. Y., or the Hawaiian Consulate, 206 Sansome St., San Francisco, Cal.

GARBAGE DISPOSAL—STREET CLEANING

MANCHESTER, N. H.—J. C. Bicford, Pres. Bd. of Health, writes us that the matter of the disposal of the garbage is in the hands of the street and park commissioners, and the subject of buying an incinerator is in the hands of the mayor and aldermen.

CHICOPEE, MASS.—Richard D. De Witt, Secy. Bd. of Health, informs us that the following bids were received May 1 for collecting the garbage; all bidders from Chicopee Falls: (1) being for Chicopee Center; (2) for Chicopee Falls; (3) for Willimansett; (4) for the whole territory; (5) for totals of the sections: V. T. S. Keith, (1) $329, (2) $149, (3) $71, (4) $499, (5) $549; Wm. A. McFadden, (1) $300, (2) $250, (3) $50, (4 and 5) $600; Thos. Murphy, (4 and 5) $599; Henry Mason, (1 and 2) $250, (3) $175, (4 and 5) $675. Geo. McQueen, (1) $275, (2) $225, (3) $60, (4) $550, (5) $560. Latter awarded contract at $550.

BUFFALO, N. Y.—The board of public works has approved the specifications drawn by Superintendent Hillery of the Bureau of Streets for the new contract for collecting the garbage of the city for a term of about four years. It will be ready to advertise for bids in a few days. The contract is worth about $100,000 a year.

NEW YORK, N. Y.—It is stated that plans for a new crematory for garbage, to be situated on Blackwell's Island, were approved May 11 by Charities Commissioner Keller. The crematory will cost $6,500, and will destroy ten tons of garbage a day. It will be built directly opposite 67th St., on Blackwell's Island.

ROCHESTER, N. Y.—The council has directed Thos. Holahan to collect the garbage of the city for $2,000 a month.

UTICA, N. Y.—Bids are asked by the city clerk until June 1 for cleaning the streets.

WAPPINGER'S FALLS, N. Y.—The board of trustees has decided to purchase a street sprinkler of 300 gallons capacity.

NEW ALBANY, IND.—The mayor has been authorized to ask for bids for the removal and disposing of the garbage.

SANTA ROSA, CAL.—Mayor Sweet has appointed Councilmen J. M. Carter, W. B. Simpson and Geo. S. Brown a committee to investigate the question of purchasing a crematory.

STREETS AND ROADS

NASHUA, N. H.—Reports state that the council has voted to pave Temple St., at a cost of $6,000.

BOSTON, MASS.—It is reported that the following bids have been received for paving and regulating parts of Causeway, Commercial, Prince, Endicott and Medford Sts., and Charles River bridge: Jones & Meehan, $18,807 (accepted); H. Gore & Co., $19,687; Daniel E. Lynch, $21,956; James Lahey & Co., $22,883.

LENOX, MASS.—It is reported that surveys are being made on the highway to Lee and the Depot St. road, preparatory to asking for bids; estimated cost, $12,000.

NORTH ADAMS, MASS.—Reports state that the council has voted to pave a portion of Union and State Sts., and to appropriate $15,000 for the work.

WEST BOYLSTON, MASS.—Bids are asked by the Metropolitan Water Board, 3 Mt. Vernon St., Boston, until May 31, for building a road about 7,100 ft. long in West Boylston and Sterling, and for improving the roadway of Lancaster St. in West Boylston.

WEST NEWTON, MASS.—It is reported that the contract for the laying of concrete side and cross walks for 1899 has been awarded to Mr. Wilson, of Boston, at $9,810.

WINCHESTER, MASS.—It is reported that the county commissioners will rebuild Cambridge St. from the Arlington to the Woburn line.

PASCOAG, R. I.—Reports state that the town has voted to appropriate $13,000 for macadamizing.

AMSTERDAM, N. Y.—Considerable brick paving is now under consideration in this place, and bids will soon be asked for the work.

BUFFALO, N. Y.—It is stated that the lowest bids for asphalt paving have been received as follows: Summer St., Barber Asphalt Co., $22,071; Richmond Ave., N. P. Burgard, $28,475; Norwood Ave., H. P. Burgard, $8,900; Edson Ave., American Contracting Co., $7,650; Duerstein St., American Contracting Co., $9,850. Reports state that the Board of Public Works has been directed to prepare plans and specifications and to ask for bids for paving on Carroll St.

CANANDAIGUA, N. Y.—It is reported that Chapin St. is to be paved, at a cost of $7,582.

NEW ROCHELLE, N. Y.—The paving of Main St. with vitrified brick will be one of the first of the street improvements to be made under the bond issue that has been authorized by the council.

NEW YORK, N. Y.—Bids are asked until May 25 for furnishing and delivering to the Department of Highways three 10-ton steam road-rollers. James P. Keating, Comr. of Highways.

ROCHESTER, N. Y.—Bids are asked until May 24 for paving with asphalt Childs St. and Irving Place; estimated cost, $23,200. Chas. M. Beattie, Clk.——It is stated that the following are the lowest bids that were recently received for paving: Jefferson Ave., asphalt pavement, Warren-Scharf Co., $34,749; Jefferson Ave., brick pavement, H. B. Hooker, $30,276; Front St., Medina block pavement, two sections, Whitmore, Rauber & Vicinus, $6,774 and $18,542; Laura St., asphalt pavement, Rochester Vulcanite Co., $2,960; Brooks Ave., Medina pavement and cement walks, William Fuller, $3,148.

SCARSDALE, N. Y.—Reports state that the issuance of $35,000 in bonds for the improvement of highways has been authorized by the board of supervisors.

SCHENECTADY, N. Y.—It is stated that the following bids have been received for grading, curbing and flagging: Duane Ave., John Twomey, $8,880; Isaac Van Vechten, of

Esperance, $9,900; Kellam & Shaffer, $9,100; Abram G. Veeder, $8,430 (accepted). Mumford St., Kellam & Shaffer, $5,094; Abram G. Veeder, $4,765 (accepted); John Twomey, $5,160; Isaac Van Vechten, $5,436.

WHITE PLAINS, N. Y.—It is reported that the board of supervisors has authorized the issue in bonds of $80,000 for the macadamizing of Mamaroneck Ave., North St. and Westchester Ave.

BLOOMFIELD, N. J.—Bids are asked by the township committee until May 22 for paving about 15 miles of road with Telford pavement. James H. Moore, Chn. Road Com.

ELIZABETH, N. J.—Bids are asked until June 1 for paving in eight streets with any of the following: Trap block, about 85,000 sq. yds.; lake asphalt, about 88,000 sq. yds.; rock asphalt, about 95,000 sq. yds.; brick, about 75,000 sq. yds.; Telford macadam, about 65,000 sq. yds. N. K. Thompson, St. Comr.

FRANKLIN, N. J.—We are informed that the following bids have been received for building 10,437 ft. of macadam roads: George A. Rogers, Plattsburg, N. Y., $63,510; Silk City Construction Co., Paterson, N. J., $55,694; Dewitt C. Bonker, New York, $54,651.

GUTTENBERG, N. J.—Bids are asked until May 25 for grading, flagging, curbing and guttering of Hudson Ave., from Twenty-second to Twenty-third St., West New York. Francis J. Tonn, Town Clk.

HASBROUCK HEIGHTS, N. J.—Bids are asked until June 5 for macadamizing and improving Terrace Ave., as stated in our advertising columns. G. H. Ramsden, Borough Clk.

JERSEY CITY, N. J.—Bids are asked until May 23 for paving with asphalt about 3,194 sq. yds. in Kensington Ave. Geo. T. Bouton, Cy. Clk.

MAY'S LANDING, N. J.—J. J. Albertson, County Engr., Magnolia, N. J., has been ordered by the county freeholders to make a survey of the proposed gravel road from Egg Harbor City to Lower Bank.

PATERSON, N. J.—Reports state that the board of freeholders has adopted the resolution to sell $20,000 of road bonds.

WOODBURY, N. J.—It is reported that plans for the proposed new gravel road from Woodbury to Knight Run, and from Hurffville to Cross Keys, were approved, and the director was authorized to ask for bids.

BETHLEHEM, PA.—Bids are asked by the county commissioners until June 2 for the construction of a road between Bethlehem and Nazareth.

EASTON, PA.—Bids are asked until June 2 for constructing about 8 miles of macadam road, as stated in our advertising columns. J. M. Young, Engr.; J. W. Falvey, County Clk.

ERIE, PA.—Bids are asked until May 22 for the construction of a brick pavement on Holland St., from the south line of Eighth St. to the south line of the L. T. & M. S. Ry. Co.'s track. B. E. Briggs, Cy. Engr.

LOCKPORT STATION, PA.—It is reported that bids will soon be asked for the construction of a road from Ninevah to Centerville.

SCOTTSDALE, PA.—We are informed that at an election held May 6 the borough decided by a vote of 353 to 104 to issue $34,000 in bonds, to be expended as follows: $4,000 for town hall; $5,000 for extending sewer system and $25,000 for paving four miles of streets, curbing and one-third of the paving to be paid for by the borough and the remaining two-thirds by the abutting property owners.

NEW ORLEANS, LA.—Bids are asked until May 22 for asphalt paving in two streets. W. S. Douglass, Comptr.

NEWPORT, KY.—Bids are asked until May 20 for 5,000 lin. ft. combined concrete curb and gutter. W. L. Glazier, Cy. Engr.

OWENSBORO, KY.—Reports state that the council has made an appropriation of $31,000 for street paving.

BOND HILL, O.—Bids are asked until June 5 for furnishing the necessary labor and materials for the improvement of Paddock Road. A. J. Kiphart, Village Clk.

DAYTON, O.—Bids are asked by the Central Branch, National Home for D. V. S., until 2 p. m., May 19, for supplying all labor and materials, and laying about 33,255 sq. ft. of cement pavement. M. McCoy, Treas.

McCONNELLSVILLE, O.—Bids are asked until May 31 for $10,000 street bonds. Geo. Birch, Village Clk.

CROWN POINT, IND.—Bids are asked by the board of commissioners of Lake county until June 5 for the construction of a series of macadamized roads in Cedar Creek township, about 15 miles in length; deposit, $5,000, as stated in our advertising columns.

GREENSBURG, IND.—Bids are asked by the common council until May 22 for improving North Anderson St., from Michigan Ave. to 7th St. Wm. Brazelton, Cy. Clk.

INDIANAPOLIS, IND.—Bids are asked by the board of public works until May 24 for grading, graveling and rolling eight alleys; for the paving and improvement of the sidewalks in ten streets.

RILEY, IND.—Bids are asked by the county commissioners until May 23 for the improvement of about 16 miles of roads.

MENOMINEE, MICH.—It is reported that the county commissioners have decided to build a new road from this city to Cedar River, a distance of 32 miles, at an estimated cost of $10,000.

OWOSSO, MICH.—Bids are asked by the board of public works until June 1 for furnishing all material and for the construction of about 7,000 yds. of asphalt paving, with curbing, storm-water drainage and appurtenances, as stated in our advertising columns. Deposit, $5,000.

CHICAGO, ILL.—Bids are asked by the department of public works until May 20 for the construction of an asphalt bicycle path on Michigan Ave., from the south line of Randolph St.——Reports state that the following contracts for paving have been awarded: Albany Ave., Douglas Boulevard to 19th, $20,141, R. F. Conway; Calumet Ave., 21st to 31st, $53,000, Standard Paving Co.; North Hamline Ave., Lake St. to 265 ft. north of Fulton, $8,775, J. H. Coyode; Sacramento Ave., August to Division, $13,441, J. H. Coyode; 16th St., Michigan to Indiana, $6,027, J. H. Coyode; Wells St., Illinois to Kinzie, $5,556, J. H. Coyode.

QUINCY, ILL.—Bids are asked by the board of local improvements until May 20 for curbing, excavating, grading and paving with brick in three streets.

SANBORN, ILL.—Bids will soon be asked for the building of 15 miles of macadam roads in Cedar Creek township.

MINNETONKA, MINN.—Bids are asked until May 27 for grading and graveling a part of the Superior boulevard. C. J. Minor, Audr. of Hennepin County.

ST. PAUL, MINN.—Bids are asked by the board of public works until May 22 for paving in Minnesota St.

KANSAS CITY, MO.—Bids are asked by the board of public works until May 23 for the construction of stone sidewalks in six streets; paving in five alleys with vitrified brick; paving in two streets with asphalt; paving in five streets with vitrified brick; and for constructing brick sidewalks in four streets.——Reports state that Tenth St. is to be graded from Grand Ave. to Locust St.; estimated cost, $8,000.

HOUSTON, TEX.—It is reported that the following bids for paving have been received and recommended: McGowan Ave., Municipal Improvement Co., rock asphalt, $25,183; Houston Ave., Hipp & Key, sheet asphalt, $25,410; Crawford St., Hipp & Key, Thurber brick on gravel foundation, $6,972; Milam St., Municipal Improvement Co., rock asphalt with stone curbing, $8,284.

SAN LUIS OBISPO, CAL.—It is reported that a street roller is to be ordered.

INGERSOLL, ONT.—Reports state that a steam roadroller is likely to be purchased.

MOUNT FOREST, ONT.—Bids are asked until May 20 for the construction of about 12,000 ft. of cement concrete sidewalk. W. C. Perry, Town Clk.

TORONTO, ONT.—Bids are asked until May 22 for screened gravel, to be delivered east of Yonge St., and also to the Rosehill reservoir, for the year ending December 31, 1899.——Bids are asked until May 22 for asphalt, brick, block, concrete and macadam pavement on several streets. John Shaw, Mayor.

WILLIAMSTOWN, ONT.—It is reported that the council has decided to purchase a stone-crushing outfit.

MANUFACTURING PLANTS.

LISBON FALLS, ME.—Reports state that the Lisbon Falls Fibre Co. will make improvements to its plant, to cost about $100,000.

BOSTON, MASS.—A 5-story brick manufacturing building on Dover St., occupied by the New England Screw Co., Goodwin & Cummings, and others, was destroyed by fire April 30; reported loss, $80,000.

NORTH ADAMS, MASS.—Reports state that the Berkshire Mfg. Co. is increasing its plant by the erection of a new mill of 100,000 spindles capacity; estimated cost, $1,500,000.

MECHANICSVILLE, N. Y.—The Berlin Iron Bridge Co., East Berlin, Conn., has the contract for erecting a new machine room, 72x170 ft., for the Duncan Co., at Mechanicsville. The roof trusses will be arranged with trolley beams and hoists, so that the rolls of paper can be lifted in and out of the machines by power.

WOODHAVEN, N. Y.—Reports state that an addition will be built to the plant of the Lalance & Grosgean Mfg. Co.; estimated cost, $80,000. Mathew Le Page, Arch.

LEBANON, PA.—The Eureka Flouring Mill, owned by E. Strickler's Sons, has been destroyed by fire; reported loss, $40,000.

READING, PA.—Reports state that the Walter Steel Malleable Iron & Steel Co. has leased the plant of the Keystone Works along the Lebanon Valley Railroad, and will begin operations at once, turning out about 4,000 lbs. of steel castings a day.

BALTIMORE, MD.—It is reported that plans for the improvement of the hat factory and warerooms of Townsend, Grace & Co. have been completed by George C. Haskell. A 6-story brick and steel building will be erected, to cost $45,000.——Reports state that Geo. W. Carter, 338 South Mount St., has the contract for the erection of a brewery, in which Wm. H. Kruger, Cleveland, O., is interested.——Plans are being prepared for another new brewery to be erected on the site of the Hagerstown Steam Engine Works; cost, $75,000. O. Beyer, Chicago, Arch.

NORFOLK, VA.—It is reported that Kennedy & Hamilton, Newport News, Va., have the contract for the erection of a silk mill for the Norfolk Silk Co.; estimated cost, $40,000.

WHEELING, W. VA.—Reports state that the Wheeling Iron & Steel Co. will erect a tin-plate mill and a wrought-steel pipe mill; estimated cost, $75,000.

NEW LONDON, N. C.—Reports state that the North Carolina Power Co. will erect a flour mill in this city at an estimated cost of $500,000. E. B. Hambley, Pres., Salisbury, N. C.

WILMINGTON, N. C.—Reports state that a cotton factory of 10,000 spindles and 500 looms will be erected in this city. E. C. Holt is said to be interested.

SPARTANBURG, S. C.—Reports state that a new cotton mill of 5,000 spindles is to be erected in this city. Among those interested are T. R. Trimmier and J. P. Stevens.

CARTERSVILLE, GA.—It is reported that a flour mill with a capacity of 100 bbls. a day will be erected in this city. John P. Lewis, Cave, Ga., and Jas. W. Vaughan.

NEW ORLEANS, LA.—It is reported that the Louisiana Cotton Mill Co., Ltd., will install 3,000 additional spindles and make other improvements to its mills, to cost $30,000.

CHATTANOOGA, TENN.—Reports state that a 10,000 spindle cotton mill is to be erected in this city; estimated cost, about $150,000. David Giles is interested.

MASSILLON, O.—The paintshop and threshing machine warehouse of Russel & Co. were destroyed by fire May 8; reported loss, $500,000.

MASSILLON, O.—The thresher and engine plant of Russell & Co. was damaged by fire May 8, causing a loss of about $400,000.

GRAND RAPIDS, MICH.—The Grand Rapids Veneer Works were destroyed by fire May 15. Reported loss, about $90,000; insurance, $45,000.

ROCK ISLAND, ILL.—It is reported that the war department, Washington, D. C., has decided to increase the size of the machinery plant of the Rock Island Arsenal so as to enable the turning out of 2,500 Krag-Jorgensen rifles a day.

MILWAUKEE, WIS.—Plans have been prepared for a 5-story factory building to be erected at South Water and Reed Sts. for F. A. Walsh; estimated cost, $75,000. Crane & Barkhausen, Archs.

ST. LOUIS, MO.—Reports state that the Standard Stamping Co. will erect a factory near Broad and Chambers St., to cost about $75,000.

ST. LOUIS, MO.—It is reported that the Pullman Palace Car Co. will erect large manufacturing and repair shops in St. Louis, to replace those that were destroyed.

HONOLULU, H. I.—Reports state that the Honolulu Iron Works are to be erect new buildings in the Kakeako District, and to greatly increase the capacity of the plant. H. Hedemann, Supt. of the company, is now in the United States placing orders for additional equipments.

GAS PLANTS.

PROVIDENCE, R. I.—The Providence Gas Co. will make large additions to its plant during the present season and have placed contracts with the Berlin Iron Bridge Co., East Berlin, Conn., for a new meter house, 65 ft. wide, 110 ft. long; a purifier house 40 ft. wide and 175 ft. long and three stories high; and also for a gas holder building 184 ft. in diameter. The entire construction will be steel frame work.

NEWARK, N. Y.—Reports state that C. L. Ingham and John Otis, Jr., of Buffalo, have purchased a lot adjoining the Lake Shore tracks, to be used as a site for a proposed plant, which is to cost $40,000.

NEW YORK, N. Y.—Bids are asked until May 22 for furnishing electric light and gas for the streets, public buildings and parks for one year. H. S. Kearny, Comr. Pub. Bldgs., 21 Park Row.

BETHLEHEM, PA.—Reports state that Edward C. Jones & Co. have purchased the plant of the Bethlehem Gas Co., for $200,000, and is negotiating for the purchase of the plant of the Bethlehem South Gas & Water Co., for $500,000.

RICHMOND, VA.—Reports state that the question of making repairs to cost about $10,000 is being considered by the officials of the gas works.

CLEVELAND, O.—It is stated that the Federal Gas & Fuel Co. projectors have asked the authorities for the right to distribute natural gas for illuminating and fuel use in the city.

NEW COMPANIES.—People's Gas Co., Port Huron, Mich.; $75,000; G. B. Stocks, E. J. Schoolcraft.

Citizens' Gas Co., of Yonkers, Yonkers, N. Y.; $10,000; Ralph A. Sturges, Chester J. Munn, Jr., Harry N. Avery.

Columbus Gas Co., Port Allegheny, Pa.; $150,000, with $15,000 paid in; N. R. Bard, E. P. Dalrymple, C. Woolforce.

Lakewood Gas Co., Trenton, N. J.; $100,000; A. M. Bradshaw, F. P. Freeman, George G. Smith.

Central Oil & Gas Co., Cheyenne, Wyo.; $500,000; W. H. Berry, Chester, Pa.; H. S. Moreland, Chicago; H. Wilson, Zanesville, O.

Denver Gas & Electric Co., Denver, Colo.; $3,500,000; Elroy N. Clark, Herman H. Dunham, C. W. Waterman.

Sunbeam Acetylene Gas Co., San Francisco, Cal.; $20,000; C. B. Littlefield, F. W. Ely, John Marshall.

MISCELLANEOUS CONTRACTS.

DRAINAGE SYSTEM.—Moline, Ill.—It is reported that the question of constructing a drainage system is being considered.

SMOKE STACK.—Adrian, Minn.—Bids are asked until May 26 for erecting a brick smoke stack. C. A. Sands, Village Recdr.

DUMP SCOWS.—Chattanooga, Tenn.—Bids are asked until June 17 for constructing three dump scows. Maj. D. C. Kingman, U. S. Engrs.

TELEPHONE SYSTEM.—Lancaster, O.—It is stated that the North Electric Co., of Cleveland, is making efforts to secure a telephone franchise.

DREDGING.—Toledo, O.—Reports state that bids will soon be asked for dredging Swan Creek, from Perry St. to Clover Leaf bridge; estimated cost, $6,000.

CANAL.—Oshkosh, Wis.—It is reported that a bill providing for the construction of a canal between this city and Green Lake has passed both houses; estimated cost, $50,000.

SHIP CANAL.—Stockton, Cal.—Reports that the construction of a ship canal from deep water to Stockton, a distance of 14½ miles, is being considered; estimated cost, $300,000.

EXCAVATION.—Bridger, Mont.—Bids are asked until June 1 for removing seven miles of dirt for a ditch to be 2 ft. wide. B. F. Wormsley, Secy. Clarkes Ford & Silvertip Ditch Co.

DREDGING.—Chicago, Ill.—Bids are asked until June 15 for dredging in Chicago harbor, and for other work as stated in our advertising columns. Maj. W. L. Marshall, U. S. Engrs.

DREDGING.—Lubec, Me.—Bids are asked until June 12 for dredging at Lubec channel, as stated in our advertising columns. Maj. S. W. Roessler, U. S. Engrs., 337 Congress St., Portland.

DREDGING.—Galveston, Tex.—Bids are asked until June 15 for deepening channel from Galveston harbor to Texas City, as stated in our advertising columns. Capt. C. E. Riche, U. S. Engrs.

TELEPHONES.—New London, Conn.—The New London Telephone Co. has been granted permission to erect poles and place conduits in the streets of the city, to conduct its proposed telephone service.

BREAKWATER.—Larchmont, N. Y.—Bids are asked until June 12 for building rip-rap breakwater at Larchmont harbor, as stated in our advertising columns. Maj. H. M. Adams, U. S. Engrs.

DREDGING.—Gulfport, Miss.—Bids are asked until June 9 for dredging channel from Gulfport to Ship Island, as stated in our advertising columns. Maj. Wm. T. Rusell, U. S. Engrs., Mobile, Ala.

BOOM AND RAFT WORK.—New Orleans, La.—Bids are asked until June 9 for constructing log boom and removing raft near mouth of Bayou Courtableau, La. Maj. James B. Quinn, U. S. Engrs.

EXCAVATION.—Portland, Me.—Bids are asked until June 12 for ledge excavation at Mooseabec Bar, and Sullivan Falls, Maine, as stated in our advertising columns. Maj. S. W. Roessler, U. S. Engrs.

STEAM LIGHT VESSEL.—Washington, D. C.—Bids are asked until June 10 for furnishing the material and labor necessary for a first-class steam light vessel. Rear-Admiral F. J. Higginson, U.S.N., Chn.

TELEPHONE EXTENSION.—Kalamazoo, Mich.—Reports state that the directors of the Central Telephone Co. have decided to extend their lines from Albion to Jackson, where connections may be made with Detroit.

GOVERNMENT PIERS.—Muskegon, Mich.—Bids are asked until June 14 for repairing government piers, as stated in our advertising columns. Capt. Chester Harding, U. S. Engrs., 57 Park St., Grand Rapids, Mich.

GOVERNMENT PIER.—Grand Haven, Mich.—Bids are asked until June 10 for repairing government piers at Grand Haven, as stated in our advertising columns. Capt. Chester Harding, U. S. Engrs., 57 Park St., Grand Rapids.

LOCK AND DAM.—St. Louis, Mo.—We are informed that the contract for the completion of lock and dam No. 1 on the Osage River has been awarded to J. D. Wallace, of Champaign, Ill., at $142,965. F. B. Maltby, U. S. Asst. Engr.

TELEPHONE EXTENSIONS.—Salem, Ore.—It is reported that the Oregon Telephone & Telegraph Co. is contemplating the extension of its line throughout the state, the principal extension being a line from Dalles to Prineville.

DREDGING.—New York, N. Y.—Bids are asked by the Department of Sewers, 21 Park Row, until May 24 for dredging Gowanus Canal from the bulkhead at Douglass St. to the 4th St. basin; and from Garnet St. to Hamilton St.

BREAKWATER.—Fairport Harbor, O.—Bids are asked until June 12 for constructing part of west breakwater at Fairport harbor, as stated in our advertising columns. Col. Jared A. Smith, U. S. Engrs., 185 Euclid Ave., Cleveland, O.

CEMENT, BULKHEAD WALL.—New York, N. Y.—Bids are asked by the board of docks, Pier A, North River, until May 26 for furnishing about 10,000 bbls. of Portland cement; also for furnishing granite stones for bulkhead or river wall.

TELEPHONE LINE.—Ogdensburg, N. Y.—It is reported that the Webb Telephone & Telegraph Co. has been incorporated and will construct a line to Malone, giving connections with Utica, Saratoga, Herkimer and Boonville; capital, $10,000; Dennis Maynehan, of Clearwater; Frank E. Stephens, of Utica; Daniel F. Stroebel, of Cold Brook.

DREDGING.—Portland, Me.—Bids are asked until June 15 for dredging George's River, as stated in our advertising columns. Maj. S. W. Roessler, U. S. Engrs.

DREDGING.—Buffalo, N. Y.—The following bids have been received for work on the new government breakwater: Buffalo Dredging Co., $70,179; James P. Donnelly, $72,487; George W. Carter & Son, $73,225; Frank Sylvester, $74,455.

LIFT LOCK.—Cohoes, N. Y.—Governor Roosevelt has signed the bill which provides for the building of the Dutton lift lock. It will be erected near the Cataract House, and work will be started this summer; estimated cost, $1,500,000.

TELEPHONE SYSTEM.—Denton, Md.—It is reported that the Bee Line Telephone Co. has been organized to establish a system in Denton, which is to be extended to the leading towns and villages of Caroline county. Albert W. Sisk, Pres.

MAPS AND SURVEYS.—Pomeroy, O.—Bids are asked by the commissioners of Meigs county, until May 25, for making the necessary maps and plans to enable the several district assessors to correctly re-appraise the real estate of the county in 1900.

TELEPHONE EXTENSION.—Dover, Del.—Reports state that the Diamond State Telephone Co. is making arrangements to extend its system to connect with Salisbury, Cambridge, Easton, Chesterton and Centreville, Md., and Lewis and Rehoboth, Del., and a number of other places.

DREDGING.—Newport, R. I.—Bids are asked until June 15 for dredging Taunton River and Fall River Harbor, Mass.; construction at Nantucket, Mass., and breakwater construction at Sakonnet Point, R. I., as stated in our advertising columns. Maj. D. W. Lockwood, U. S. Engrs.

TELEPHONE SYSTEM.—Long Island, N. Y.—Reports state that the Seaboard Telegraph & Telephone Co. proposes to erect a telephone service on Long Island, from Far Rockaway to Montauk, on the South Side, thence to Orient and Riverhead, taking in all the villages to Brooklyn.

RIVER WORK.—Memphis, Tenn.—Bids will soon be asked for river improvements in the upper St. Francis district, from Point Pleasant to Pecan Point, consisting of enlargement and repairing; in the upper Yazoo district and in the White River district below Helena. Capt. F. E. Winslow, U. S. Engrs.

PIER.—New York, N. Y.—The following bids for the construction of a wooden pier at the foot of Rutgers Slip were received by the Dock Department, May 12: Alger C. Gildersleeve, 39 Cortlandt St., $32,833 (accepted); Barth S. Cronin, Clinton St. and Hamilton Ave., Brooklyn, $33,270; Spearin & Preston, 11 Broadway, $34,983; Wm. H. Jenks, 130 Pearl St., $35,779.

SUBWAY.—Philadelphia, Pa.—The following bids were received May 6 for work on Contract No. 53 of the Pennsylvania Ave. subway and tunnel; contract awarded Ryan & Kelley; both local bidders:

Items and quantities.	Ryan & Kelley, 8 So. Broad St.	S. B. Opdyke, Jr., 1222 Belmont Ave.
Bumpers: Stand. high freight..28 each.	$200	$270
Stand. high frgt., on trestle 4 "	157	300
Standard high wall ..... 6 "	80	115
Special, at warehse, compl. 3.....	1,525	1,406
Strngthng floor, etc., warehouse, compl't	1,100	1,150
Wall, railing & gates at electric crane	1,000	731
Fence, east side 16th St., complete....	1,200	1,440
Total	$11,531	$14,429

MACHINERY, ETC.—Poland, Russia, Peru, Sweden, etc.—Some hints to contractors, mining machinery supply men and machinery makers generally are afforded in the following notes from correspondents of the Philadelphia Commercial Museum: A number of grain elevators on the American plan have been built in Russia during the last few years. The Raizan-Ouralsk Rd. Co. alone has put up 25 elevators having a total capacity of 26,000,000 lbs. The erection of grain elevators is to be resumed within a short time, particularly in the new regions. The construction of a regular system of grain elevators throughout the Russian territory is one of the principal projects recommended by the commission for the improvement of the grain trade, which lately met at St. Petersburg. The Russian Minister of Finance, M. de Vitte, has approved the commission's project, and promised government financial assistance in case of need. It is probable that the work will be done by private enterprise, the provincial councils and the railway companies.——The present is a good time for constructors of light railways to interest themselves in Warsaw, Russian Poland district. Many small connecting branches are being built. Hitherto all this work has been done by Germans. Two German contracting firms have opened branches at Warsaw. Three years ago there was one light railway running from Warsaw to Wilanow, about four miles out. Now there is one to Grojec and one to Marki. These lines are used both for passenger and goods traffic. A new line from Warsaw to Bielany, situated about four miles up the Vistula, is being talked of; also a line from Warsaw to Blonie. In addition, three new lines in the provinces are soon to be built, namely, from Ruda Guzowska to Sochazew, from Kutno to Radziw, and from Czenstochowa to Herby.——Roadmaking machinery suitable for digging the earth, gravel, sand and the like from the ground and raising it into carts; the carts for transporting and dumping the material; steam road-rollers and similar appliances for roadmaking are unknown in Sweden, according to a Stockholm correspondent. All such work is done by a pick and shovel, except rolling in large cities, which is done by steam rollers. Iron beams will be required by C. O. Lundberg, who erects and owns many houses in Stockholm, and is about to put up a large building. A new Parliament building and a bank building are also to be erected. Cast-iron pipes are delivered to and laid by contracting gas fitters. American manufacturers could probably find customers for them among the water-works and gas-works companies of Stockholm and other large cities.——There are a variety of pumps in use in Tasmania, and a Hobart correspondent says that really good pumping and winding plants at reasonable prices would command the market. A large number of pumping and winding plants are in use, and nearly every new mine requires one as soon as it reaches 100 ft., the water at that depth being, as a rule, too strong for hand labor or a whip or whim. It is the rule also, rather than the exception, that the mines are opened up by means of main engine shafts. There is a growing market for air compressors and rock drills competent to do heavy work. For its size, Tasmania possesses a great number and variety of mines and minerals, and it may fairly be said that the market for all kinds of mining plant requisites is a growing one, and likely to become comparatively extensive. Mining lamps are not in general use. They might be introduced to advantage. Candles are still the method of lighting mines. The picks and shovels principally in use are Ames', American, retail price about 5s. 6d.; Hollingsworth's, British, retail 4s. 9d. to 5s.; "Ballarat," Victorian, retail 3s. 6d. to 4s.; and "Zeehan," Tasmanian, retail 3s. 6d. to 4s. each.——Wells are bored on the coast of Peru, which is the agricultural zone. Their average depth is from 4 to 6 metres. In the north of Peru, in the Department of Piura, irrigation is accomplished by river water raised by steam duplex pumps. On other parts of the coast small patches of ground are irrigated by water raised from wells, but this is not the usual means employed, as generally the land is irrigated by channels driven direct from the rivers. There is a demand for machinery for this purpose. The demand for pumps for general house or farm use is small. Windmills for pumping water are not yet in much use, but there is no doubt that the use of them for that purpose is increasing. A device for raising large quantities of water worked by animal power would meet with a sale. Americans should advertise or exhibit their goods. The pumps now sold in Peru are the Gould, Cameron, Worthington, Black, Deane, Knowles and Perrings, and some German pumps. The class of machinery generally used in mines for stamping and pulverizing minerals are the stamp mills of Fraser & Chalmers, Chicago, Ill., and the Ball mills, "Kugelmuhle," coming from Germany. Certain establishments use rollers of English or American make. The old Chilean mills have gone out of use. With reference to the cost of this machinery delivered in Peru, one can calculate a surcharge of $10 to $15 gold above the factory price. It cannot be said that there is a constant demand for this class of machinery. The miner or mining company deciding to procure machinery for the treatment of his minerals asks for plans and specifications from foreign manufacturers, and in accordance with the data furnished him so does he order. This trade is chiefly in the hands of the agents of Fraser & Chalmers, Chicago, and the factories of Krupp, Koppel and Grusenwerke, of Germany. This class of machinery is imported in Peru free of duty, provided that the consular invoices, which must accompany the bills of lading, are marked "maquinaria para minas."——The South American countries offer markets of increasing importance for mining machinery. A very pertinent point regarding the character of the machinery suited to the country made by a correspondent at Juliaca, Peru, the center of a large mining district, is worthy of attention: "One cause for complaint against American machinery of this country," he says, "is that the parts of the so-called sectional mills are too heavy for transportation. Our American manufacturers should bear in mind that in these South American countries wagon roads are almost unknown, and mule trails, especially in the mining section of the Andes, are very poor. We experienced great difficulty in moving our mill, the greater part of which, excepting that suitable for llama cargoes, had to be brought by Indians some ten leagues, which is not only a very expensive, but a very difficult task. There are numerous small mines in this section of the country that might be profitably worked if suitable machinery could be gotten to them without too great an outlay. Many of these are located from one to five days journey from a passable mule trail, and the expense of building the remaining distance for the transportation of machinery would cost more than the property is worth, on account of the ruggedness of the country. Provisions are carried to these mines either by llamas or Indians." The same writer says that very little mining machinery is at present in use in the district. There are two or three concerns about to erect small mills for treating free milling ore, one of which was having its mill built in Arequipa at the railroad shops, its owners being employees of the railway company, and the other has purchased a mill of German make. There is also a concern in Sandia prospecting a mine, and as its capital and engineer are American, doubtless American machinery will be used.

Bids Received at Boston, Mass., May 11, 1899, for Constructing the Mariboro Brook Filter Beds.

Quantities.	A. Saucier, South Framingham.	Baker & Judson, Gloversville, N. Y.	C. E. Trumbull & Co.[1] & Chas. C. Cralb.[2]	Newell & Snowling Cons. Co., Uxbridge.	E. W. Everson[3] & J. J. Everson.[4]	Long & Little, Leominster, Mass.	Cenedella Bros., Milford, Mass.	The United Co., N. Y.
Excavation:								
Earth—Class A.....19,000 cu. yds.	$0.60	$0.70	$0.66	$0.66	$0.65	$0.95	$1.00	$1.41
Class B. ..... 6,000 " "	.50	.60	.60	.66	.60	.75	.80	1.36
Class C. .....69,000 " "	.21	.20	.21	.26	.30	.28	.40	.32
Rock .... 200 " "	.50	3.00	.75	1.50	3.00	2.00	.40	2.25
Masonry:								
Portland cem. conc... 660 " "	7.00	7.00	6.25	7.00	7.00	6.00	6.25	6.75
Brick, Prtld cem. mor. 35 " "	14.00	12.00	12.00	15.00	15.00	15.00	15.00	14.00
Dimension-stone ..... 12 " "	28.00	25.00	35.00	25.00	35.00	30.00	17.50	25.00
Stone paving: First-class 50 " "	3.50	5.00	7.00	8.00	6.00	6.00	4.00	2.50
Second-class ..... 105 " "	1.50	2.50	3.50	4.00	3.50	2.75	1.25	1.50
Laying vitrified pipe:								
6-in. with open joints 1,070 lin. ft..	.20	.15	.21	.14	.15	.15	.12	.10
6-in. " cem. " 60 " "	.20	.17	.23	.15	.15	.15	.12	.13
8-in. " open " 970 " "	.24	.20	.25	.18	.18	.18	.18	.14
8-in. " cem. " 110 " "	.24	.22	.27	.19	.20	.20	.18	.17
10-in. " open " 1,270 " "	.35	.25	.30	.24	.25	.23	.27	.20
10-in. " cem. " 660 " "	.35	.27	.32	.25	.25	.25	.27	.25
10-in. " filter " 1,110 " "	.42	.28	.40	.28	.25	.30	.32	.26
12-in. " open " 960 " "	.50	.30	.38	.31	.40	.34	.32	.28
12-in. " cem. " 300 " "	.50	.30	.40	.32	.40	.35	.32	.34
12-in. " filter " 960 " "	.50	.32	.53	.35	.40	.40	.37	.35
15-in. " open " 280 " "	.60	.45	.50	.42	.50	.50	.47	.38
15-in. " cem. " 370 " "	.60	.45	.52	.43	.50	.50	.47	.44
15-in. " filter " 970 " "	.60	.47	.80	.48	.50	.55	.50	.45
18-in. " filter " 270 " "	.80	.60	.92	.60	.65	.65	.66	.62
20-in. " cem. " 360 " "	1.25	.70	1.05	.67	.80	.75	.87	.78
20-in. " filter " 500 " "	1.25	.75	1.12	.72	.80	.85	.90	.79
24-in. " cem. " 100 " "	1.50	1.00	1.25	.97	1.10	1.25	1.25	1.10
Total	$39,918	$40,671	$41,423	$44,472	$47,280	$51,529	$60,493	$66,350

[1]Boston, Mass. [2]Winthrop, Mass. [3]Providence, R. I. [4]Newtonville, Mass.

CONTRACT PRICES.

LEVEE WORK.—West Memphis, Tenn.—We are informed that bids were received by the levee board May 6, 1899, for constructing 11 miles of levee in Lee county, Ark., as advertised in Engineering News; H. R. McVeigh, Secy.; H. N. Pharr, Ch. Engr., Memphis. The following are the quantities: No. 97, 90,000 cu. yds.; No. 98, 96,000; No. 99, 93,000; No. 100, 99,000; No. 101, 68,000; No. 102, 63,000; No. 103, 80,000; No. 104, 128,000; No. 105, 207,000; No. 106, 164,000; Nos. 107 and 108, 160,000; total, 1,248,000 cu. yds. The bids were as follows: N. J. McLeoud, Greenville, Miss., Secs. 101 and 102, 11.97 cts.; T. Mike, Memphis, Secs. 97 and 98, 13¼ cts., 99 and 100, 14 cts., 101 and 102, 12½ cts., 103 and 104, 14 cts., 105, 25 cts., 106, 20 cts., 107 and 108, 20 cts. McCadden & Roach, Memphis, 15.11, all or none. Aderholt & Lowrence, Friars Point, Miss., Secs. 97 to 106 inclusive, 26¾ cts., 107 and 108, 17¾ cts. J. S. McTighe, Memphis, Secs. 97 to 104 inclusive, 18 cts; 105 to 108 inclusive, 24½ cts. T. M. Jacks, Helena, Ark., Secs. 97, 98 and 99, 12¼ cts., 100, 13 cts., 101, 15 cts., 102, 14 cts., 103, 12¼ cts., 104, 19⅞ cts., 105, 21¼ cts., 106, 19¼ cts., 107 and 108, 18½ cts. T. B. Goff, Henderson, La., Secs. 99 to 101 inclusive, 15.49 cts., 102, 12.21 cts., 104, 18 cts. John G. Sessions, Leota, Miss., Secs. 98, 99 and 100, 16.72 cts., 103 and 104, 13.42 cts., 106, 22.92 cts. Ernest Hyner, Greenville, Miss., Secs. 97, 14 cts., 98 and 99, 17 cts. G. A. McBain & Bro., Memphis, Tenn., Secs., 97 to 104 inclusive, 16⅜ cts., 105, 22⅞ cts. I. R. Babbit, Baton Rouge, La., Secs. 97 to 100 inclusive, 15½ cts., 101 and 102, 11⅞ cts., 103, 13⅞ cts., 104, 16½ cts. Arnold & Co., Memphis, 17⅝ cts., all or none. J. H. McTighe, Memphis, Secs. 97 to 99, 19½ cts., 100, 17.40 cts., 101 to 103, 14.74 cts., 104, 19½ cts., 105, 30.74 cts., 106 to 108, 29.74 cts. Robt. Johnson, Memphis, 14.70 cts., all or none (awarded contract); W. M. Bates, Memphis, Secs. 97 to 99, 15 cts., 100 to 101, 12 cts., 102 and 103, 10.39 cts., 104, 14 cts., 105, 27 cts., 106, 25 cts., 107 and 108, 22 cts. P. H. Rogers, Helena, Ark., Secs. 97, 11.73 cts., 101, 10.73 cts., 102, 10.40 cts., 103, 12.40 cts., will take one section only. Stone & Stencil, Rosendale, Miss., Secs. 99 and 100, 15 cts., 101 to 103, 11 cts., 104, 13 cts; will take only 300,000 yds. Thomas Bros., Memphis, Secs. 97 to 99, 17 cts., 107 and 108, 18½ cts. J. H. Carey, Memphis, 15½ cts., all or none. Batt O'Brien, Memphis, Secs. 101 and 102, 12.45 cts. D. L. Ferguson, Memphis, Secs. 97 and 102 to 104, 14 cts., 98 to 100, 15 cts., 101, 16 cts., 105, 50 cts., 106 to 108, 20 cts.

PUBLIC LIGHTING, ETC.—Washington, D. C.—Our correspondent informs us that the following bids were received May 13, 1899, for lighting streets, avenues, alleys, etc., for the coming fiscal year with naphtha lamps: (1) being for 1,000 naphtha, including all appliances, except posts, (2) for 1,000 lamps and all appliances, except lamp arms and posts, (3) each additional lamp, including all appliances except posts, (4) each additional lamp with appliances: Pennsylvania Gas Light Globe Co., Philadelphia, present contractors (1 to 4 inclusive), $20 each; American Development Co., St. Paul, Minn., (1 and 3), $22.60 each (2 and 4), $18.60 each; Lawrence S. Nicolai, Washington (2 and 4), $19.90 each; asks for three or four months' time. The following bids for supplying 2,000 lanterns were also received by the district commissioners: Manhattan Supply Co., New York, $4.97½ each; 40 cts. extra for tanks and $1.05 additional for burners; also offered two other designs at $5.50 and $6.50 each, 50 cts. and $1.05 less respectively, without burners; Pennsylvania Gas Light Globe Co., Philadelphia, $5.40 each, and other patterns at $5.65, $4.90, $3.50 and $3.25; also tanks similar to that at 16th and K Sts., at $5.70 each. Agrees to sell lamps now in District at $1.50 each without tanks and burners.

DREDGING.—Peekskill, N. Y.—Col. J. W. Barlow, U. S. Engr., Army Bldg., New York, informs us that the following bids were received May 8, 1899, for dredging in Peekskill Harbor, N. Y., as advertised in Engineering News; the quantity of dredging depends upon the price to be paid: $9,600 will be expended for the work: Atlantic Dredging Co., 31-33 Pine St. New York, 13½ cts. a cu. yd.; John P. Randerson, Albany, N. Y., 8½ cts.; P. J. Brummelkamp, Syracuse, N. Y., 11 cts.; Newburgh Dredging Co., Newburgh, N. Y., 9 cts.; Edgar M. Payn, Albany, N. Y., 12.7 cts., and John H. Fenner, Jersey City, N. J., 14.75 cts.

FILTER BEDS.—Boston, Mass.—The following bids were received by the Metropolitan Water Board May 11 for constructing the Marlboro Brook filter beds, as advertised in Engineering News:

DREDGING.—Mobile, Ala.—Maj. Wm. T. Rossell, U. S. Engr., informs us that the following bids were received May 12, 1899, for dredging the harbor at Mobile: National Dredging Co., Wilmington, Del., 7 cts. a cu. yd.; Rittenhouse-Moore Dredging Co., Mobile, Ala., 7.3 cts.

TRANSPORTATION.—New York, N. Y.—Press reports state that the following bids were received by the army officials at the Army Bldg., New York, May 13, 1899, for the transportation of soldiers to San Francisco from New York: Lehigh Valley, for from 1 to 24 men, $34.30 per capita; 25 to 100 men, $29.50 per capita; Delaware, Lackawanna & Western, 1 to 24 men, and 25 to 100 men, same as first bid; New York Central, 1 to 24 men, $36, 25 to 100 men, $30.50; West Shore, 1 to 24 men, $36.50, 25 to 100, $31,50; Chesapeake & Ohio, 1 to 24 men, $36.25, 25 to 100, $31.50; Erie, 1 to 24 men, $36.50, 25 to 100, $31.50; Pennsylvania, 1 to 24, $36.50, 25 to 100, $33.50; Baltimore & Ohio, 1 to 24, $36.75, 25 to 100 $31.75; Southern Pacific, 1 to 24, $39.50, 25 to 100, $30. The route in the last bid is by water to New Orleans, and thence by rail.——Bids were also opened May 6, 1899, on the transportation of a 10-in. disappearing carriage from Watertown (Mass.) Arsenal, to San Diego, Cal.: The Chicago & Northwestern, 85 cts. a 100 lbs. to Ogden and $1.20 from thence to San Diego, with an extra charge of $25 for pit cars; Pennsylvania, 82 cts., $1.20¼ and $25; Chicago, Burlington & Quincy, 81 cts., $1.20¼ and $25; the same rate was made by the West Shore; a through rate of $2.60 was made by the Southern Pacific. There was only one bid for the transportation of a 10-in. barbette carriage from the Sandy Hook Proving Ground to the Watertown Arsenal, that of the Central R. R. of New Jersey at 18 cts. a 100 lbs.——Bids were also recently opened for transporting one breech-loading rifle, weight 114,740 lbs., from Sandy Hook Proving Grounds, to San Francisco. The bidders were as follows: Pennsylvania R. R. Co., 85 cts. a 100 lbs. to Ogden, Utah; The Chicago, & Northwestern R. R. Co., 83 cts. to Ogden; Lehigh Valley R. R. Co., to San Francisco, 90.7 cts.; The Chicago, Rock Island & Pacific R. R. Co., from Sandy Hook to Calcago, 35 cts.; Ogden, 88.7 cts; the Chicago, Milwaukee & St. Paul R. R. Co., $1.757 to San Francisco; Chicago Burlington & Quincy, $1.7372 to San Francisco.——Bids were also opened for transporting one breech-loading rifle, weight 114,740 lbs., from Sandy Hook to Fort Schuyler, N. Y. H. The bidders were: The Chapman Wrecking Co., $749; the Hudson River Lighterage Co., $1,200.

WATER PIPE, CASTINGS, ETC.—Newark, N. J.—M. R. Sherrard, Engr. and Supt. Water Dept., informs us that the following bids were received May 11, 1899, for furnishing water pipe, castings, etc., f. o. b. Newark; pipe,

4 to 10 ins., 513 gross tons; and 12 to 36 ins., 277 gross tons: Warren Foundry & Machine Co., Phillipsburg, N.J., $23.90 a ton; U. S. Cast-Iron Pipe & Foundry Co., Burlington, N. J., $23.20; Camden Iron Works, Camden, N. J., 4 to 10-in., $25.95; 12 to 36-in., $24.95. Special castings, 100,000 lbs., Warren Foundry & Machine Co., 2 cts.; U. S. Cast-Iron Pipe & Foundry Co., 1.9 cts.; Camden Iron Works, 2⅜ cts. a lb. The contract was let to the U. S. Cast-Iron Pipe & Foundry Co.

PARKWAY.—Winchester, Mass.—We are informed that the following bids were received by the Metropolitan Park Commission, Boston, on May 1 for building the Mystic Valley Parkway from Main St. to Middlesex Fells reservation, Winchester; contract was let on May 3 to Coleman Bros.; W. T. Pierce, Ch. Engr.:

Bids Received at Winchester, Mass., May 1, 1899, for Constructing the Mystic Valley Parkway.

Quantities.		James J. Welch & Co., Salem.	Baker & Judson, Glovrsville, N. Y.	T. Stuart & Son, Newton.	McCusker Bros., Waltham.	Mirick & Wentworth, Malden.	T. H. Gill, Somerville.	Charles G. Craib, Boston.	Coleman Bros., Charlestown.
Grading: Earth	18,000 cu. yds.	$0.23	$0.35	$0.26	$0.25	$0.28	$0.25	$0.30	$0.20
Rock	200 " "	2.00	2.50	2.00	1.25	2.50	1.50	1.25	1.00
Pipe drain: 8-in.	900 lin. ft.	.25	.20	.22	.20	.20	.21	.18	.25
10-in.	350 " "	.32	.25	.28	.27	.30	.27	.24	.30
12-in.	200 " "	.45	.30	.40	.36	.40	.35	.30	.40
15-in.	530 " "	.58	.40	.52	.45	.50	.49	.40	.50
18-in.	1,200 " "	.70	.55	.68	.65	.66	.72	.65	.75
20-in.	220 " "	1.10	.65	.90	.86	.90	1.00	.65	1.00
Under drain, 4-in.	600 " "	.30	.15	.30	.40	.35	.35	.33	.40
Masonry: Brick	120 cu. yds.	12.00	12.00	12.00	12.00	12.50	12.00	10.00	12.00
Rubble, laid dry and painted.	540 " "	4.50	4.50	4.50	3.50	3.50	3.00	4.50	4.50
Rubble, laid in cement mortar	90 " "	8.00	6.00	5.50	4.50	7.50	4.00	7.00	5.00
Stone coping	1,370 lin. ft.	1.30	1.35	1.50	1.35	.95	1.25	1.25	1.30
Stone steps	165 " "	1.50	1.60	2.00	1.90	1.70	1.50	1.40	2.00
Edgestones	1,335 " "	.90	.90	.95	1.00	.94	1.05	.82	.90
Block paved gutters	1,400 sq. yds.	2.25	1.50	1.70	2.50	1.50	1.30	1.80	1.55
Gravel walk surfacing	700 cu. yds.	1.00	1.10	1.00	1.00	.86	.70	1.15	1.00
Loam surfacing	3,000 " "	.30	.35	.30	.20	.36	.33	.30	.25
Loam to be furnished	1,500 " "	1.50	.90	1.25	.75	.85	.92	.90	.70
Broken stone surfac'g (2,000 lbs.)	3,700 tons....	A—1.90	1.70	1.70	1.85	1.85	1.95	1.40	1.75
		B—1.35	1.35	....	1.65	1.85	1.50	1.10	1.50
Totals		A—Trap rock.. $28,436	$27,518	$27,089	$26,547	$26,174	$25,384	$25,342	$24,613
		B—Local stone. 26,401	26,223	.....	25,807	26,174	23,719	24,232	23,688

PIG LEAD.—Winnipeg, Man.—C. J. Brown, Cy. Clk., writes us that the following bids were received April 3, 1899, for furnishing 100 tons of pig lead, all local bidders: Miller, Morse & Co., $82.80; Jas. Robertson, $80.89 (accepted); J. H. Ashdown, $85; Alex. Harvey, $90 a ton.

DREDGING.—Wallabout Channel, N. Y.—The following bids were received by the U. S. Engineer, Army Building, New York, May 2, 1899, for about 183,000 cu. yds. of dredging (scow measurement) in Wallabout Channel, N. Y. H., as advertised in Engineering News: R. G. Packard Co., 130 Pearl St., New York, at 19 cts. a cu. yd.; Atlantic Dredging Co., 31 Pine St., New York, 15 cts.; Henry Du Bois Sons Co., 119 South St., New York, 12.9 cts.; Jas. S. Steers, 1 Broadway, New York, 14⅝ cts.; Morris & Cumings Dredging Co., 17 State St., New York, 19.9 cts.; P. Sanford Ross (Inc.), 277 Washington St., Jersey City, N. J., 19½ cts.; Wm. H. Taylor, Jr., 22 Emory St., Jersey City, N. J., 14¼ cts.; Frank H. Brainard, 17 State St., New York, 19⅞ cts.; John H. Fenner, Jersey City, N. J. (accepted), 9⅜ cts.; Thos. H. Benton, Elizabeth, N. J., 20 cts.

BREAKWATER SUPERSTRUCTURE.—Buffalo, N. Y.—Maj. Thos. W. Symons, U. S. Engr., received the following bids May 10 for a concrete superstructure on the breakwater at Buffalo; all are local bidders:

Bids Received at Buffalo, N. Y., May 10, 1899, for Constructing a Concrete Breakwater Superstructure

Quantities.		Frank M. Sylvester.	James B. Donnelly.	Buffalo Dredging Co.	George W. Carter & Sons Co.
Removing old superstructure	1,015 lin. ft.	$6.00	$4.50	$6.75	$4.00
New timber in work	3,000 ft. B.M.	30.00	89.00	24.00	30.00
New stone for filling	2,000 tons....	1.00	.75	.66	1.25
Concrete blocks and concrete in place	8,900 cu. yds.	7.00	7.02	6.64	7.00
Dredging for foundation of crib	1,000 " "	.25	.25	.30	.25
Stone for foundation of crib	500 tons....	1.00	.75	.66	1.25
Manhole covers	100 each...	2.25	5.00	1.25	5.00
Mooring rings	20 " ...	25.00	55.00	30.00	20.00
Timber crib filled and completed		2,500	1,450	1,475	2,500
Total		$74,455	$72,488	$70,169	$73,225

WATER METERS.—Camden, N. J.—The following contract was let, according to local papers, to the National Water Meter Co., New York, for furnishing the Crown water meter: ⅝-in., $12; ¾-in., $14; 1-in., $28.90; 1¼-in., $50; 2-in., $65; 3-in., $135; 4-in., $250; 6-in., $500.

INDUSTRIAL NOTES.

THE COLORADO FUEL & IRON CO. has the contract for furnishing the Pacific & Idaho Northern Ry. Co. with about 10,000 tons of 65-lb. rails, according to reports.

JOSEPH R. LEHMER, Railway and General Supplies, announces his removal from 303 and 305 South 13th St., to 1212 Farnam St., Omaha, Neb.

EVANS, ALMIRALL & CO., 44 Dey St., New York, have closed contract with the Red Oak Electric Light Co., of Red Oak, Ia., for a central heating plant, using the Evans system of exhaust hot water heating.

THE F. W. EMERSON MFG. Co., Rochester, N. Y., manufacturers of drafting-room furniture, drawing tables, etc., has just shipped four of its largest drafting tables to the American Car & Foundry Co., Berwick, Pa.

THE CHICAGO PNEUMATIC TOOL CO. has purchased the patents formerly owned by the Consolidated Pneumatic Tool Co., now defunct. These patents include all the Keller & Wolstencroft types of tool construction, and in addition several new applications which have not yet been taken out.

THE RICHMOND LOCOMOTIVE WORKS, Richmond, Va., has shipped the first of the 12 locomotives being built for a railway in Sweden. Reports state that the engine has no bell and no pilot or cow catcher. The engineer sits on the left instead of on the right side of the cab, and his signals are on that side.

THE STILWELL-BIERCE & SMITH-VAILE CO., Dayton, O., exported to London last month twelve 12-10-12-in. duplex pumps. Several smaller shipments of condensers were made during the same period to Cuban ports. The company is reported to be figuring on orders for water-wheels for Brazil and New Zealand.

McINTOSH, SEYMOUR & Co., Auburn, N. Y., are reported to have orders for two 115-HP. compound engines for shipment to Yokohama, Japan; 150-HP. compound and 80-HP. simple engines to drive an electric light plant in the city of Mexico, and two compound ones, of 250 HP. each, for mining purposes at Kimberly, South Africa.

THE GRUSON IRON WORKS, of New York, was incorporated at Albany, on May 8, to manufacture chilled iron armor, gun carriages, gun turrets, casemates and chilled and unchilled castings of iron and steel. The directors are P. H. Griffin, and T. Guilford Smith, of Buffalo; Thomas Prosser, Ernst Thalmann and Herbert L. Satterlee, of New York city; C. W. Barnum, of Lime Rock, Conn.; D. Townsend, of Philadelphia; S. Singer, of Paris, France, and Capt. A. E. Pierkowski, of Magdeburg, Germany.

THE EUREKA STEEL WORKS, Chester Pa., which has been idle since December, 1898, has been purchased by persons connected with the Pennsylvania Steel Co. and the Maryland Steel Co. The sale was negotiated by Geo. M. Booth, President of First National Bank of Chester, and the purchasers were represented by Edgar C. Felton, Pres. Pennsylvania Steel Co.; President Wood of the Maryland Steel Co.; Luther S. Bent and Richard Peters, Jr. The plant will be operated by a new corporation to be known as the Solid Steel Co., and will employ about 500 hands

THE BALDWIN LOCOMOTIVE WORKS, Philadelphia, has received an order from the Reading Ry. Co. for 20 consolidated freight engines, according to reports. Other recent orders received by the firm are three passenger locomotives of the Atlantic type for the St. Paul & Duluth Ry., and a 16-ton saddle tank locomotive and one 49-ton (10-wheeled engine) for the Hilo R. R. in Hawaii.

THE PLAYFORD STOKER CO., 404 Telephone Bldg., Cleveland, O., manufacturer of mechanical smokeless furnaces, has just finished the installation of three 250-HP. stokers for the Crystal Ice Co., Allegheny, Pa. The company is installing at the present time four stokers to go under 500-HP. Sterling safety water-tube boilers for the Edward Ford Plate Glass Co., Toledo, O., which is erecting a plant in that city, and is also installing the seventh Playford stoker in the plant of the Grasselli Chemical Co., Cleveland. The latter is the second order the Playford Stoker Co. has received from this company, all of the stokers being under 150-HP. return tubular boilers. The company has lately received an order from the Frank Kneeland Co., Granite City, Ill., for eight stokers for 250-HP. Heine safety water-tube boilers, and four stokers for 175-HP. Cahall boilers.

THE VULCANUS FORGING CO., Cleveland, O., has purchased a plant on Hamilton St., between Wason St. and Case Ave., in that city, and has started in business to manufacture all kinds of railway and special forgings. The factory has been equipped with steam hammers, lathes, planers, drills and presses, and is operated by a power plant consisting of two 150-HP. boilers, and a 150-HP. engine. The officers of the company are: Pres., Frank J. Patterson; Vice-Pres., John R. Blakeslee, Jr.; Secy. and Treas., A. G. Hathaway; Mgr., Jacob Weintz, and Supt., Arthur Scott.

THE GROTON BRIDGE & MFG. CO., of Groton, N. Y., reports a heavy trade in all classes of bridge and building work. Large additions to the company's loading and storage facilities have recently been completed, and more yard room secured. This, with new machinery recently installed, will increase the output about one-third.——The Ithaca, N. Y., Water & Gas Co. is building extensive additions to its plant. A bridge will be erected over Cascadilla Gorge, to carry gas and water pipes, and an entirely new gas house constructed. Both structures will be furnished by the Groton Bridge & Mfg. Co.

ESSON & ESSON, Chamber of Commerce Bldg., Chicago, have been awarded the contract for doing all of the subway work in connection with the track elevation on the Chicago, Burlington & Quincy R. R., except masonry and sand filling, which the company is doing itself; and also the track elevation work for the Pittsburg, Fort Wayne & Chicago R. R., which these companies are doing in Chicago, and is also executing several large contracts for paving for the city of Chicago. This firm is making a specialty of track elevation work, and heavy bridge masonry and concrete construction, together with general public improvements.

MINING MACHINERY IN SOUTH AFRICA.—The Philadelphia Commercial Museum informs us that South Africa furnishes a good field for the exploitation of mining machinery. In March the Belgian Consul-General at Pretoria, Transvaal, wrote to the "Commercial Bulletin," Bruxelles, Belgium, that many articles were used in the Transvaal that could be supplied by Belgian manufacturers, such as the following: Machinery for extraction (tandem compound system) adapted especially for extraction at great depth; steel buckets, armored beams and cast-iron columns; rails and cars for mines, and motor machines for grinding and for repairings. Every European firm that has succeeded in doing business at Witwatersrand has established not only a commercial agency but also a technical bureau, where all projects are studied, with a supply store where articles in demand are found. Among the establishments represented in the Transvaal are: Krupp-Gruson Works, of Magdebourg; Arthur Koppel, New York and Berlin; Siemens & Halske, Chicago and Berlin; Technical & Commercial Corporation, of Berlin; Fraser & Chalmers, Chicago and London; Reunert & Lenz; Hubert Davis and others. Regarding the same matter, a correspondent of the Philadelphia Commercial Museum at Johannesburg writes that the principal mining machinery used in that country consists of stamp mills, ore breakers, driving and hauling engines, electrical machinery and pumps, which are mostly supplied by first-class makers in America and England. There is no opening here for any machinery or goods except of the very best quality, and second-class work will never be made to go on these fields. Mining tools, such as drills, picks, shovels, etc., are chiefly obtained from England, and at the present time are being sold at very low prices. The area of the country which is opened for mining machinery and supplies is almost entirely confined to the Witwatersrand District, as very few of the mines in the outlying districts have proved sufficiently valuable to need large supplies of machinery.

MACADAM ROAD.

EASTON, PA., May 17, 1899.

Sealed proposals will be received at the office of the Board of County Commissioners, Easton, Northampton County, Pennsylvania, until Friday, June 2d, 1899, at 10 o'clock, a.m., for the construction of about eight miles of macadam and telford macadam road. Plans and specifications may be examined and full information obtained at said office, or at the office of J. Marshall Young, Engineer, Room 1, Pomfret Building, South 3d St., Easton, Pa.

A certified check, payable to the order of the "County Commissioners of Northampton County, Pa.," for the sum of Five Hundred ($500) dollars, must accompany each bid. The said Commissioners reserve the right to reject any and all bids.

WILLIAM COYLE,
PRESTON H. RIEGEL,
WM. H. REAGLE,
Commissioners.

JOHN W. FALVEY,
Clerk. 20-2t

SEWER.

HACKENSACK, N. J.

Sealed proposals will be received by the Hackensack Improvement Commission at the Commission Rooms, Mercer St., until 8:30 p. m., Monday, June 5, 1899, for constructing about 932 feet of 24-inch pipe sewer in Poplar Avenue, together with manholes, catch-basins, etc.

Drawings and specifications may be seen and blank forms of proposals obtained at the office of Lemuel Lozier, Engineer, No. 1 Main Street, Hackensack.

Proposals shall be made upon the blank forms furnished.

All proposals shall be accompanied by a certified check for two hundred ($200) dollars, drawn to the order of the Hackensack Improvement Commission, as surety that if proposal is accepted contract will be entered into.

The Hackensack Improvement Commission reserves the right to reject any or all bids.

M. E. CLARENDON,
President Hackensack Improvement Com.

JACOB BAUER, Secretary. 20-2t

SEDIMENTATION RESERVOIR.

ENGINEER'S OFFICE
AMERICAN PIPE MFG. CO.,
112 N. BROAD ST., PHILADELPHIA, PA.,
May 17, 1899.

Proposals will be received by the American Pipe Manufacturing Co., at their office in the Fidelity Mutual Life Association Building, not later than June 1, 1899, for the construction of a ten-million (10,000,000) gallon sedimentation reservoir, near Media, Delaware Co., Pa. Plans and specifications may be seen at the office of the Chief Engineer about May 25, 1899. An approximate estimate of materials is as follows:

6,927 cubic yards embankment.
2,878 " " waste material.
3,895 " " puddle.
1,497 " " rubble masonry.
1,214 " " concrete.
164 " " dry flote wall.
3,090 square yards sodding.
1,200 feet 20-inch vitrified pipe laid complete.

The right is reserved to reject any or all bids or to accept any bids which appear advantageous to the American Pipe Manufacturing Company.

J. W. LEDOUX,
20-1t Chief Engineer.

U. S. ENGINEER OFFICE, 537 Congress St., Portland, Me., April 26, 1899.—Sealed proposals for Ledge Excavation at Mooseabec Bar and Sullivan Falls, Maine, will be received here until 12 m., June 12, 1899, and then publicly opened. Information furnished on application. S. W. ROESSLER, Maj., Engrs. 20-4t

DO YOU WANT TO PURCHASE SUPPLIES? —— ALL THE PROMINENT MANUFACTURERS READ ENGINEERING NEWS.

ADVERTISE FOR BIDS IN THIS PAPER AND SECURE DESIRABLE COMPETITION.